# RAILWAY AGE

THE STANDARD RAILROAD WEEKEY FOR ALMOST A CENTURY

FREIGHT TRAFFIC ISSUE

**AUGUST 6, 1951** 

### 26.4% IMPROVEMENT!

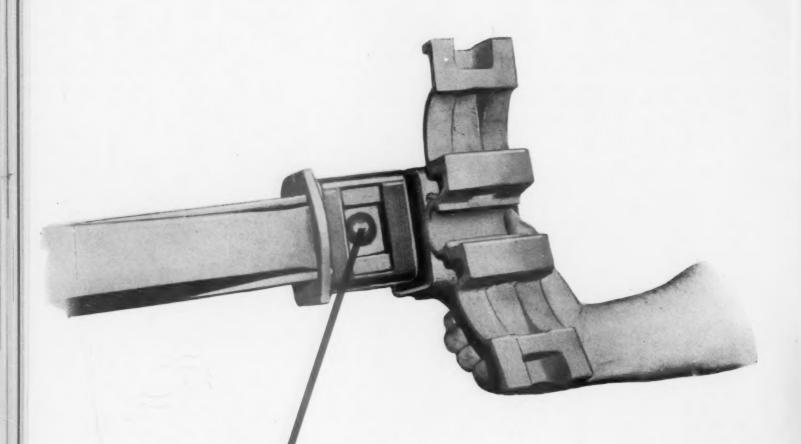
Accumulating a monthly average of 12,200 miles per locomotive, General Motors Diesels in Southern Pacific freight service between Sparks, Nevada and Ogden, Utah consistently cover the 532-mile run each way without delays for servicing. For the first ten months of 1950, the fleet averaged 104,461 gross ton-miles per train hour—a 26.4% improvement over 1948, the last year of exclusive steam operation.

### ELECTRO-MOTIVE DIVISION

GENERAL MOTORS • LA GRANGE, ILLINOIS HOME OF THE DIESEL LOCOMOTIVE

In Canada: GENERAL MOTORS DIESEL, LTD., LONDON, ONTARIO





THE ONLY No. 18 BRAKE BEAM WITH THE "QUICK-CHANGE" BRAKE HEAD

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For detailed information ask for Descriptive Catalog No. 2060

Recommended standard for use with both 24-RL and 6-SL locomotive brake equipment. This improved feed valve automatically maintains brake pipepressure at uniform level for long periods. New features improve performance and extend life. Bellows eliminates variations in setting frequently encountered with clamped diaphragm. Disc regulating valve eliminates stem wear and consequent leakage. Smooth flowing characteristics ban diaphragm hunting. Level flow reduces air turbulence, prevents deposit of suspended oil and carbon.

OUSE Air Brake Co.

WILMERDING, PA.



### **RAILWAY AGE**

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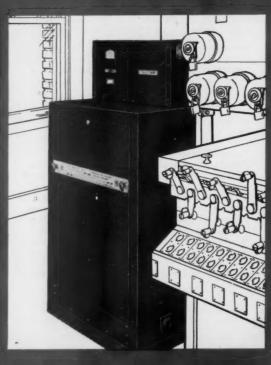
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# AT HOME ON THE RAILROAD UNION"I.T.C.!

The operating success of train communication depends largely upon those special features which make the system particularly adaptable to railroad service. And, "Union" Inductive Train Communication was designed with this in mind.

The wayside apparatus is an example. It consists of the usual necessary facilities . . . including two receivers and two loudspeakers with the twofrequency system. But in addition, it has extra features which "belong" in a wayside office, such as key-controlled circuits in the control station to permit: the use of the operator's regular desk set for normal communication with trains and the connection of an accessory handset for special purposes such as maintenance testing; and jacks for patching either receiver into the dispatcher's line.

Our representatives can tell you about other important features of "Union" I.T.C., too, including the use of plug-in components throughout the system, and means for connecting recording apparatus at wayside offices. For full particulars, call or write any of our district offices.



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NEW YORK ST. LOUIS CHICAGO

#### CURRENT RAILWAY STATISTICS

COMMENT REAL PROPERTY.	
Operating revenues, five months	4,180,123,254
1950	
Operating expenses, five months	
1951\$	3 297 621 471
1950	2,765,378,614
Taxes, five months	
1951 5	474 980 499
1950	353,765,743
Net railway operating income, f	ive months
	321,485,648
1950	253,110,891
Net income, estimated, five mor	nths
1951 \$	197,000,000
1950	133,000,000
Average price railroad stocks	
July 31, 1951	53.22
August 1, 1950	46.50
	40.50
Car loadings, revenue freight	
29 weeks, 1951	22,089,674
29 weeks, 1950	20,058,142
Average daily freight car surply	21
Week ended July 28, 1951	8.074
Week ended July 28, 1951 Week ended July 29, 1950	4,917
Average daily freight car shorter	ne
Average daily freight car shorta Week ended July 28, 1951 Week ended July 29, 1950	14,711
Week ended July 29, 1950	30,086
	30,000
Freight cars delivered	
June 1951	9,644
	3,874
Freight cars on order	
July 1, 1951	147,725
July 1, 1950	40,585
Freight cars held for repairs	
July 1, 1951	93,866
July 1, 1950	123,115
Average freight car turn-around	
June 1951	14.79
June 1950	14.60
Average number railroad employ	ees
Mid-June 1951	1,295,045
Mid-June 1950	1,240,998

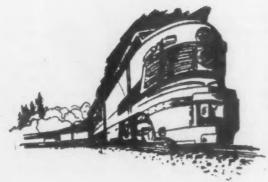
### In This Issue . . .

IN THE WEEK'S NEWS: L. & N.-N. C. & St. L. announce plans for new joint \$14-million hump-retarder yard at Radnor, Tenn.—Missouri Pacific to order 126 diesels; C. P. buys 28 to replace heavy Selkirks through Canadian Rockies from Calgary to Revelstoke.—July equipment orders for 49 diesels and 4,320 freight cars top \$35 million.—Test of shale oil in D. & R. G. W. diesel switcher proves successful.—Northwest shippers find grain trucking disrupts orderly movement of crop.—Boston court sets aside I.C.C. grain rate ruling.—More l.c.l. schedules.—W. E. Navin, Rutland president, dies.

POTENTIAL SAVING—\$110 MILLION A YEAR: That, according to the N.Y.C.'s F. K. Mitchell, is what the railroads might save by "a serious and intelligent approach" to the problem of minimizing corrosion of passenger and freight cars. Mr. Mitchell, in a recent paper, abstracted beginning on page 65, discusses in detail the hidden but ever-present danger of corrosion, and makes some practical suggestions about overcoming it.

FOR BETTER L.C.L. SERVICE: Any idea that the railroads are willing to give up easily on l.c.l. freight ought to be pretty completely refuted by the number and geographical distribution of improvements which are continually being made in that type of service. Specific changes in such service are the subject of two articles in this issue alone—one, on page 57, covers system-wide modernization of l.c.l. transfers on the Coast Line; the other, on page 62, tells how the Missouri Pacific uses modern devices to handle l.c.l. at Little Rock. Some shipper ideas on l.c.l. are also included in our news report of the Northwest Shippers Advisory Board meeting at Rapid City.

JOHN SEVIER: A larger than usual amount of space, beginning on page 46 and extending through page 56, is devoted in this issue to a complete and fully illustrated engineering and operating description of the Southern's big new John Sevier yard at Knoxville, Tenn. The reasons behind this somewhat special treatment are outlined in a page 40 editorial.



### In Washington . . .

UNIFICATION AND SIMPLIFICATION: Freight tariffs held the center of the railroad stage at Washington last week, as the subject of two highly important announcements—both of which are reported in

### WEEK AT A GLANCE

CHARLES W. BRADEN, and the National Distillers Products Corporation, of which he is general traffic manager, are among the leaders in the never-ending battle against loss and damage to freight in transit. Some of the effective weapons which Mr. Braden and his company employ are described on pages 60 and 61. Other articles in this issue dealing with the same general subject are the editorial on page 39; a description of a new loss preventing grain-tight box car door on page 71; and the story of what package engineering has done for Spiegel's, Inc., on page 74.

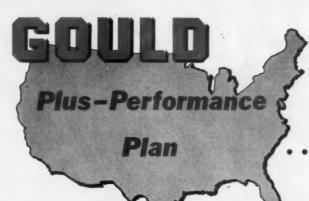
the news—pages 41 and 44, respectively. One announcement came from the I.C.C., in the form of further reports in the 28300 and 28310 proceedings. In one report the railroads were ordered to file within four months a uniform freight classification; in the other the commission promulgated a "just and reasonable" uniform scale of class rates for application in connection with that classification. The second announcement, which came jointly from the N. I. T. League and the three railroad territorial traffic executives, revealed definite plans for formation of a permanent research group to tackle the mansize job of simplifying freight tariffs.

HEADLINES: Full I.C.C. upholds C. of Ga.'s acquisition of S. & A.—Nickel Plate stock split approved.—I.C.C. examiners okay New York-Miami I.c.I. pool; also G.N. acquisition of Pacific Coast.—Accelerated amortization applications summarized.—D.P.A. announces fourth-quarter C.M.P. allotments.—Railroads ask details of brotherhoods' arbitration offer.

### . . And Elsewhere

THOSE SUPER BUSES-complete with buffet service, washrooms, etc.so widely publicized after the close of World War II, have not worked out too satisfactorily for their operators, a member of the bus industry told us recently. The gist of the matter is that a loaded bus does not normally produce enough buffet customers to warrant the cost of the attendant. One unit of the Greyhound system is still operating such coaches from Jacksonville, Fla., to both Detroit and Chicago but this service has never been expanded. The highly-publicized "deck and a half" buffet coach (a sort of dome-coach without the glass roof) never hit the road except for one pilot model which, when not on exhibition, runs in ordinary pool service between Chicago and St. Louis with no attendant or buffet service. American Buslines (Burlington Trailways) has withdrawn its nine buffet coaches from "feature" runs and placed them in pool service between New York and Chicago with the buffets closed. For a six-month test period, Continental Bus System (a Trailways unit) is operating its buffet coaches between Baton Rouge, La., and New Orleans in a supplementary deluxe service with indications of some success. More successful has been a "deck and a half" coach-minus all "fancy trimmings"operated by Queen City Trailways on various routes in the South. To the bus operator, the real advantage of this type of coach lies in the added baggage space gained by the two-level construction. Air conditioning equipment cuts rather deeply into the baggage capacity of a conventional vehicle. Then, too, the two-level construction has considerable passenger appeal as it approximates the view from a vista-dome railroad coach.

BROTHERHOOD PROPAGANDA? There aren't so many circus trains these days, but there still are some, and one of them was on its way through a nameless Southern state recently, so Railway Age is informed, when one of the apes died. The attendant, seeking to avoid formalities, just opened the car door and shoved the body off on the right-of-way. Pretty soon two colored girls came traipsing along, as they will in the remoter precincts, and spied the remains. "Who dat?" the younger one exclaimed. "Don't you know?" replied the older girl. "Dat's a diesel fireman." "How you tell it's a diesel fireman?" "Shucks, chile, don' you know? You tells a diesel fireman by his smilin' face an' shiny bottom."



. VOLTAGE REGULATOR SETTINGS IMPORTANT

# FOR LONGEST BATTERY SERVICE!

Right now, the problem of conserving and extending essential battery power is urgent. Timely help is offered you by the GOULD PLUS-PERFORMANCE PLAN which can improve battery performance as much as 50%! Here is a complete system of manuals, articles, specifications, bulletins, record cards and charts which explains and illustrates how to select, charge and handle, maintain and determine the condition of your car lighting and air conditioning batteries.

The material comprising the GOULD PLUS-PERFORMANCE PLAN is available to battery users without obligation. A request on your letterhead will bring descriptive literature by return mail.



Systematic testing with hydrometer gives accurate check on regulator setting.



#### HOW TO SET VOLTAGE REGULATOR CORRECTLY

Recommended settings as starting points for various sized car lighting and air conditioning batteries are as follows: 37 volts for 16 cells; 75 volts for 32 cells. Check regulator setting either by specific gravity readings, amount of water added, or both. Excessive water consumption is a sign of too high a voltage regulator setting and setting should be reduced. Dropping off of specific gravity is sign of too low a voltage regulator setting and setting should be raised. It is suggested that settings be changed in steps of ½ volt each. Ideal regulator setting is one that keeps specific gravity at fully charged value with a minimum of water loss.

# GOULD

### STORAGE BATTERIES

GOULD-NATIONAL BATTERIES, INC., TRENTON 7, NEW JERSEY

Always Use Gould-National Automobile and Truck Batteries

for QUICK BREAKAWAY

WHEN IT'S AN

Exide-Ironclad

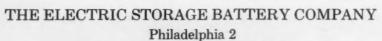
YOUR DIESELS START

# Exide-Ironclad Diesel Cranking Batteries

With Exide-Ironclad Batteries in your Diesel locomotives, you can count on high power ability for a quick breakaway and fast acceleration of engine to firing speed. You can also count on . . .

- HIGH POWER RESERVE at all times for positive operation of control equipment.
- HIGH AVAILABILITY—uninterrupted on-line service.
- EXCEPTIONALLY LONG BATTERY LIFE—low depreciation.
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- EASE OF MAINTENANCE—also easy to change and keep charged.
- RUGGED CONSTRUCTION for hard, continuous use.
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- INTERCHANGEABLE SIZES—reducing number of spare batteries required.

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Type MV-17-D Exide-Ironclad Battery —284 ampere hours—for cranking switching locomotives of 600 hp. and larger.



Type MV-25-D Exide-Ironclad Battery —426 ampere hours—for cranking road locomotives of the larger sizes.

"Exide-Ironclad" Reg. Trade-mark U. S. Pat. Of.

1888 ... DEPENDABLE BATTERIES FOR 63 YEARS ... 1951



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In Dan'l Boone's day, man had to keep his powder dry, just as Diesel owners have to keep line and crankshafts in good working order.

But even with these critical items as hard to get as a fresh supply of gunpowder in the wilderness, Diesel users needn't worry. They NO LONGER need to REPLACE such worn out parts.

Even those checked off as scrap are brought back better-than-new with Vanderloy M and PORUS-KROME\*— and for less than the price of replacements.

Parts restored in this way have the same longer-wearing life and higher efficiency that makes returns always greater than the cost of processing original equipment with PORUS-KROME.

That's a standard practice now with many Diesel owners.

And they've eliminated all over-size stocks

 because glass-smooth, diamond-hard PORUS-KROME can easily be restored again when

efficient working limits finally are reached.

It's the one sure way to "keep your powder dry."

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VAN DER HORST CORPORATION OF AMERICA
U. S. PATENTS 2,048,578, 2,314,604 and 2,412,698

OLEAN, N. Y.

PORUS - KROME VAN DER HORST

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### Why TENNESSEE EASTMAN

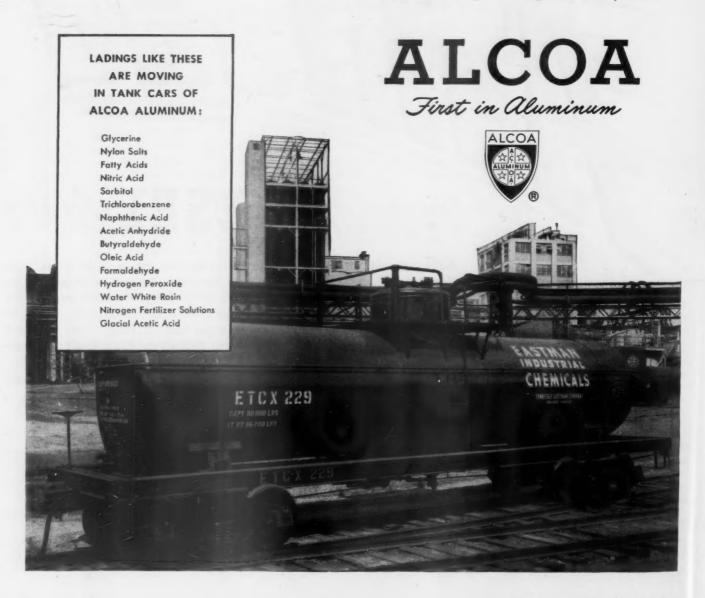
ships acetic acid in tank cars of Alcoa Aluminum Back in 1930, the Tennessee Eastman Company became a pioneer user of aluminum tank cars. Even then, they had solid proof to guide their decision. The very first aluminum tank car, built in 1928, had demonstrated its superior ability to protect the purity of glacial acetic acid. Today, Tennessee Eastman maintains its own fleet of aluminum cars for this commodity.

More and more shippers of various liquid ladings choose aluminum tank cars for one or both of the following reasons:

NO DAMAGE TO LADINGS—Aluminum does not contaminate or discolor sensitive liquids, does not promote decomposition.

NO DAMAGE TO CARS—Many acids and other corrosive ladings have no effect on aluminum. Far less painting and maintenance required.

Although military needs for aluminum may delay your purchase or lease of aluminum tank cars, why not get full information now? Alcoa originated the aluminum tank car; will make available to you the accumulated knowledge of this development. Contact your car builder. Or write ALUMINUM COMPANY OF AMERICA, 1816H Gulf Building, Pittsburgh 19, Pennsylvania.





Two box cars do the work of three when equipped with the Evans DF Loader—the Damage Free, Dunnage Free Loader—that boosts average loads by one-third, cuts loading time in half. This versatile loader locks in the load by supporting it where necessary, separating it into easily anchored components, securing it positively against shifting. Because the DF Loader eliminates tediously fitted dunnage, it slashes loading time, saving the shipper \$46.50 in material and labor, saving the railroad \$36.40 in damage. Because the DF Loader enables you to pack the car from floor to roof and from end to end—right across the doors—it increases average loads over 33%. In fact, cars with DF Loaders frequently carry up to 100,000 pounds of freight—several times the average. To deliver the goods on time, damage free, beat the shortage of box cars by loading them heavy, loading them fast, loading them often . . . with the DF Loader. Evans Products Company, Railroad Loading & Equipment Division, General Offices: Plymouth, Michigan. Plants: Plymouth, Michigan; Coos Bay, Oregon; Vancouver, B. C.



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Erection costs are low. Your regular crew can do the job by following instructions that come with each structure.

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Armco STEELOX Buildings





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BULKHEADS
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waste of manpower and materials!

use of permanent, returnable bulkheads!

Get out your pencil and start figuring your dunnage cost using old-fashioned wooden gates and you'll quickly see the substantial saving you can effect by changing to permanent, returnable Pittsburgh steel bulkheads. You do away with lumber, straps, anchor plates and special tools, and each Pittsburgh Bulkhead can be installed by two men in two minutes. Moreover, each unit is so sturdily built

that it will last indefinitely and reduce damage claims to an absolute minimum. Experience has already shown that a Pitts-burgh Bulkhead will pay for itself in savings of labor and materials in an average of 20 trips... the rest is profit to you. Why not start saving dunnage money now . . . write today to Dept. RA-1, Pittsburgh Steel Products Company, Grant Building, Pittsburgh 30, Pa.

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MANUFACTURERS OF CARBON ALLOY AND YOLOY STEELS

The steel industry is using all its resources to produce more steel, but it needs your help and needs it now. Turn in your scrap, through your regular sources, at the earliest possible moment.

# Why so often

# DO YOU SEE THIS SIGN?

Shippers have learned to fear the effects of excessive impacts . . . to doubt the half century old types of

cushioning equipment so generally used on present day freight cars . . . and with good reason!

Since at least 64% of all Hump-yard impacts exceed normal operation (the four mile per hour closure impact of conventional draft rigging) . . . since 40% of these impacts are at speeds exceeding six miles per hour, shippers have cause for concern, and railroads have need to take further steps for lading protection.

The answer is improved mechanical cushioning . . . the modern cushioning device for modern cars, WAUGHMAT TWIN CUSHIONS. TWIN CUSHIONS have no solid point. They provide complete car and lading protection against the great majority of excessive hump-yard impacts.

To protect lading, to protect cars, to insure shipper good will, equip all freight cars with WAUGHMAT TWIN CUSHIONS. Apply to new cars or existing cars for draft gear replacement.



2 out of 5 home-cars, on the average, are on home lines at all times. Hence 2 out of 5 of your lading damage claims can be charged to your own cars, on your own line, under your own operation.

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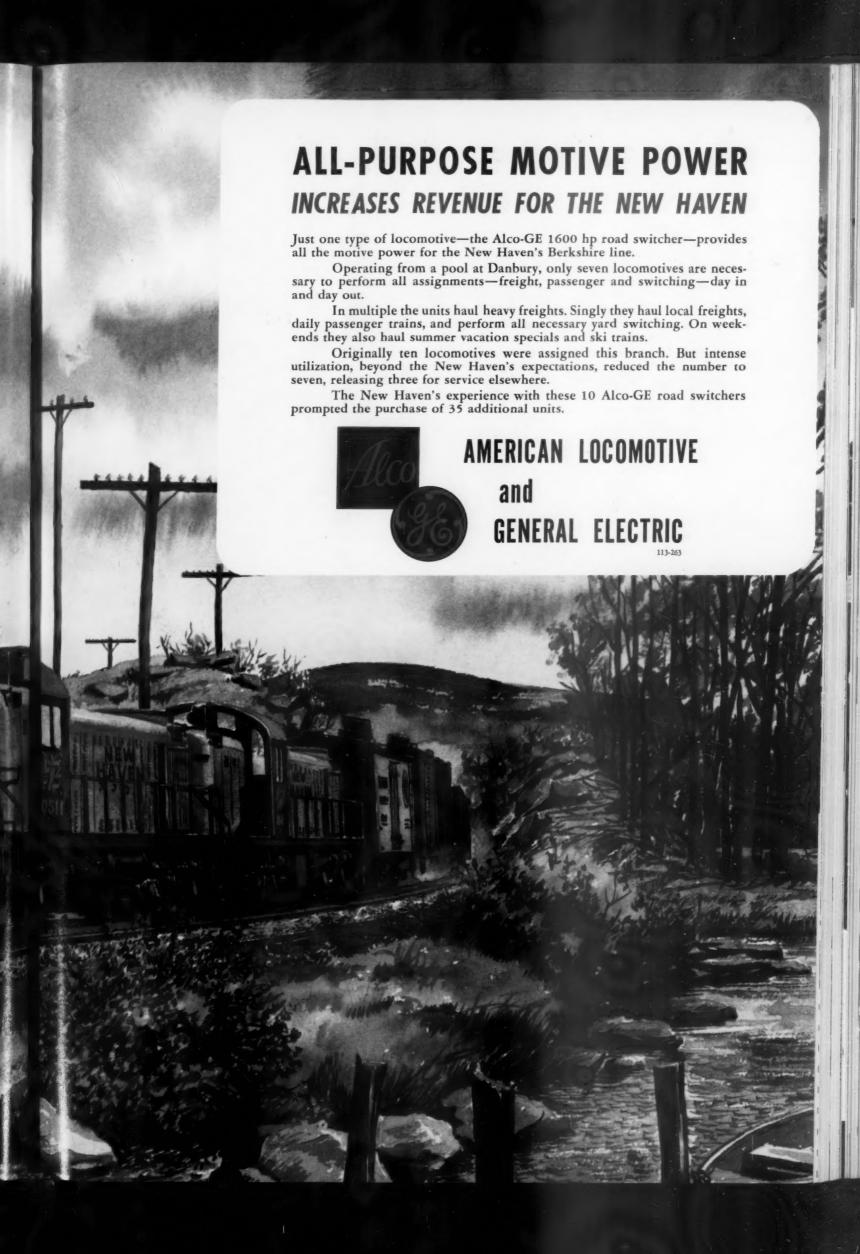
Canadian Waugh Equipment Company: Montreal

FOR CAR AND LADING PROTECTION

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Twin (ushions trade MARK REGISTER





# capacity!

ABSORPTIONI

WESTINGHOUSE FRICTION
DRAFT GEAR
Certified A.A.R.

STORDING STORY

These are the outstanding characteristics of Westinghouse Friction Draft Gears

Ore than 98% of the Cars in freight-carrying service are A.A.R. construction and over 96% have Friction Draft Gears.

The shock-absorbing capacity of the A.A.R. Friction Draft Gears in service is sufficient to protect the 4% of cars not equipped with Friction Draft Gears.



BOLSTER SPRING for A.A.R. and Long Travel springs

Cardwell Westinghouse Co., Chicago Canadian Cardwell Co., Ltd., Montreal

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THESE are days of grave concerns ... of conservation and mobilization for strengthening the nation's defense—for the survival of our national economy—for the maintenance and expansion of America's vast network of railroads—for the keeping of every home-front machine in condition to stay on the job until its replacement again becomes a normal procedure.

That includes your equipment and emphasizes your responsibilities. To benefit fully from the productive life that has been built into your "Caterpillar" equipment, you must be alert to its needs as time and hard usage take their toll in wear and depreciation. For instance:

#### How are your "Caterpillar" track shoes?

Tough as they are, they can't battle rocks, shale, jolts and grinds forever. Growing shortages in the premium steels that go into them may make early replacements difficult—and extra care of track parts something to think about.

CATERPILLAR, PEORIA, ILLINOIS



DO THIS



you're the doctor. Check those sprockets, grousers, rollers, idlers, pins, links and bushings. Proper track adjustment minimizes wear. Sprockets may need switching from side to side, and pins and bushings need turning, to provide new wearing surfaces. Shoes serve longer if you have worn grousers built up before excessive wear occurs.

Reread your Operator's Instruction Book. Anticipate your future parts requirements. Take the facts to your "Caterpillar" dealer. His modern facilities and skilled servicemen are at your disposal. He can rebuild many parts to keep your machines on the job. Their added life will repay the reconditioning cost over and over.

### CATERPILLAR

DIESEL ENGINES . TRACTORS . MOTOR GRADERS . EARTHMOVING EQUIPMENT

# PRECISION Trackwork Combination

## Matisa BALLAST CLEANER

CLEANING... AS ONLY Matisa CAN DO IT

Cleans under ties, as well as in cribs
 Permits lowering track profile
 as much as 18 inches
 One-man machine operation
 Off-track
 parking on lines in service
 Self-powered for cleaning and travel



Old methods of cleaning only shoulder and crib ballast had an excellent reason behind them: If ballast under ties was removed, there was no assurance that tie seats could be recompacted with any degree of precision.

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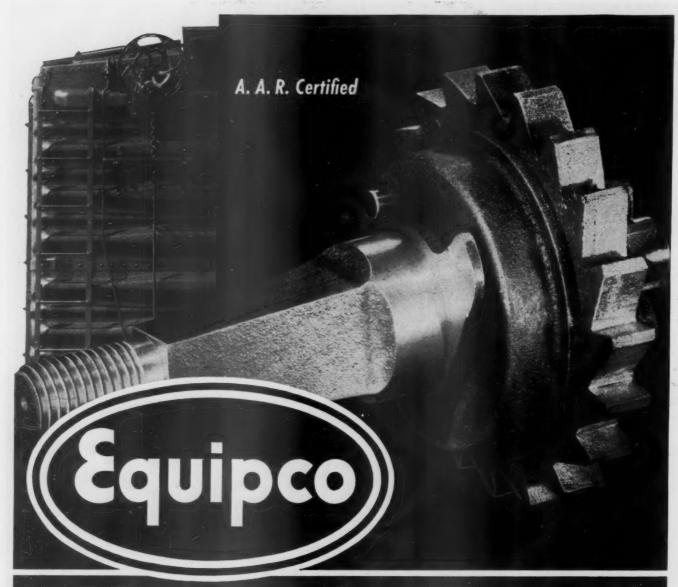
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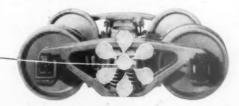
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# Cut roofing maintenance costs with Johns-Manville asbestos roofs

### **J-M Asbestos Roofing Shingles**

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This Johns-Manville Asbestos Built-Up roof on the Illinois Central Stuyvesant Docks in New Orleans—installed over 35 years ago—is still giving dependable service.

Johns-Manville Asbestos Built-Up Roofs are smooth surfaced providing thorough drainage . . . and assure a long service life for minimum initial expense. Made of asbestos, each ply is a flexible covering of stone that won't dry out, and the finished roof requires no periodic protective coating.



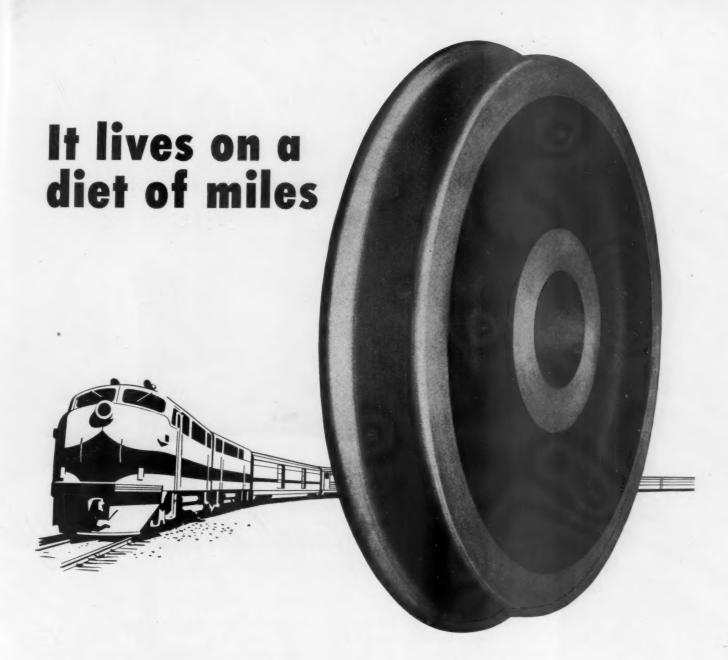
These roofs are typical of the many J-M asbestos roofs that are in service year in and year out . . . with little or no maintenance. Under constant attack from wind, rain, sun, snow and sleet . . . these roofs have set moneysaving performance records because they are weatherproof, fireproof, and rotproof.

For your next roofing job, be sure to specify Johns-Manville asbestos roofing materials. You can get further details on these durable, long-lasting materials by writing to Johns-Manville, Box 290, New York 16, New York. In Canada, write Johns-Manville Co., Ltd., 199 Bay Street, Toronto 1, Ontario.



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The prime requisite of a passenger wheel is the quality that insures a long and useful life . . . the kind of life measured in hundreds of thousands of miles.

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Constant "STOPS AND STARTS" knock out ordinary gas trucks

Constant stop-start operation in industrial trucks means costly operation. Clutch, tires, engine, power transmission parts - and even the driver - are too quickly worn out. Replacement costs mount and trucks lose time on the job. There is one way to lick this problem-it's Fluid Drive, the famous cushioned power transmission used exclusively in the new YALE Fork Lift Gas Trucks!

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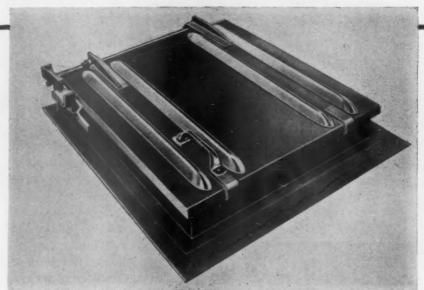
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Operation of this eccentric-actuated, automatic locking, hatch cover by a lever near the running board rather than from the eave of the car provides absolute safety for the operator.

Automatic locking device contributes to ease of operation and provides a tight seal, guaranteeing the all-important "Clean load" at destination.

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## RAILWAY AGE

EDITORIAL COMMENT

It might be wondered what became of the report of the railroads' "Committee of Nine" on freight loss and damage activities which, last April, was first presented to the board of directors of the Association of American Railroads.

The committee, comprising one operating officer, one accounting officer, and one freight claims officer from each of the three regions, was established in November by the presidents' conferences at the request of A.A.R. President W. T. Faricy. Its report is understood to have recommended important changes in present activities of the A.A.R. relating to claims and their prevention.

Shippers are intensely interested in the report and the action which may result from it. The National Industrial Traffic League has strongly recommended drastic action by the A.A.R. to strengthen its efforts. So have the 13 regional shippers advisory boards, Among other representatives of the customers of the railroads, Leland D. Smith, traffic manager of Consolidated Chemical Industries, Houston, Tex., and A. H. Schweitert, traffic director of the Chicago Association of Commerce & Industry, were called upon by the committee for their views, as designated spokesmen for the N.I.T. League and the National Association of Shippers Advisory Boards, respectively.

#### Too Big for Haste

Action on the report of the Committee of Nine has been withheld at four meetings of the A.A.R. directors. Can the board be accused of undue delay? This paper thinks not.

Any quick infusion of vigor in the A.A.R.'s prevention staff and on the individual railroads themselves which might have been produced by immediate action on the report was automatically performed by establishment of the committee itself. A live organism put under the microscope responds by squirming. The very act of soul-searching sets in motion at once a chain reaction of ideas for improvements. They are not necessarily held in abeyance until final judgment has been rendered.

#### ... NOT BUILT IN A DAY

It is more likely that the atmosphere of discussion and self-analysis which creation of the committee engendered speeded, rather than halted, the railroads' prevention efforts. Despite rising values of commodities on which claims were paid, the railroads' ratio of claims paid to freight revenues collected in the first four months of 1951 dropped to 1.04, compared with 1.08 in the whole of 1950, and lower than the ratio in any year since the close of World War II. In the year 1950, itself, the claims account was down 21.9 per cent, the suspense account down 15.6 per cent, and new claims filed down 9.4 per cent, compared with 1949.

The fact is, the principal reason for the "delay" in acting on the committee's report is the very interest which the indi.idual railroads are taking in it. Presidents both on and off the A.A.R. board are demanding time to investigate and time in which to be heard on the matter.

#### Some Perplexing Problems

The fact is also that there is no simple, clear-cut answer to the problems posed. One question with which the report may deal is whether the prevention staff should be separate from claims staff. Individual roads show differing approaches to this set of alternatives in their own organizations. Some railroad officers assert that a parallel is found in the promotion of safety, where, they hold, a staff separate from those adjusting injuries claims, and a direct arm of the operating department, is desirable. Other officers argue that nobody knows better how to prevent freight claims than the man who has to pay them. Why strip the experienced Freight Claim Division and its wide membership of claims officers of its prevention job and staff? Their success in settling, on an orderly basis, the responsibility of the several railroads for claims on interline shipments, they point out, is proof that they are best equipped to carry through also a strengthened inter-carrier program of prevention.

There is posed also the question of a workable "chan-

nel of command" for any strengthened prevention organization which might be devised in the A.A.R. in the operations field. The A.A.R. can't set up a "czar," in this or any other field of its activity. Even if it changed character and purpose, and amended its charter to so provide, the already hostile U. S. Department of Justice would trumpet "assembly" for its eager beaver attorneys before the czar's name could be announced.

It is certain that whatever prevention personnel and job are prescribed for the A.A.R. by its board will measure its success by the extent to which the individual member roads carry out on the line what its staff organization recommends. Good liaison will come only if officers of member roads who can get action on their lines are responsive to the goals and methods of the A.A.R. prevention staff. How can this "responsiveness" be best obtained? By having the head of the A.A.R. prevention program - whether separate from freight claims or not - report to the large General Committee of the Operating-Transportation Division (comprised of top operating officers of the railroads)? By reporting to the Operations-Maintenance vice-president of the A.A.R.? Or by reporting direct to the president of the A.A.R., who would "get action" through the presidents of member roads?

These are just a few of the perplexities which inhere in any reorientation of loss and damage activities in the A.A.R. The railroad presidents need time to resolve them. Since the psychological effect of the Committee of Nine's work has already been manifested on the railroads, there is nothing to be gained by haste in setting up a program which will be worthwhile only if it does an even better job than the A.A.R. is now doing.

#### A NEW WEAPON IN THE ARSENAL

More than usual space is being devoted in this issue to the Southern's new John Sevier yard at Knoxville. True, the combination of ultra-modern tools of railroading—including even radar—represented in the new facility would alone justify special attention. Many of these devices were undreamed of as recently as 10 years ago—at least as aids to rail transportation.

But a more important reason is that it is good, from time to time, for railroad men and their customers to stop and look at what is happening to transportation. John Sevier is about the most dramatic "summing up" on the current scene of what is happening to railroading. Perhaps this paper may be accused of taking its cue from the Southern, which has gone "all-out" to tell the real significance of the new facility in terms of service, money, wages and national defense. But let those who would be critical expose themselves—and then see whether they can withstand such infectious enthusiasm!

The Southern has made the yard the subject of the lead editorial in the current issue of its sprightly magazine "Ties"; calls this yard "the most important improvement we have made to date"; and reminds employees to be "thankful" for a yard which cuts an average of eight hours off transit time on any car routed through Knoxville—compared with the old order—and helps safeguard their jobs. We are mindful, also, that John Sevier is the yard from which the Southern serves the Oak Ridge atomic plant and the enormous plant of the Aluminum Company of America at Alcoa — both of them symbols of the kind of modern armed and industrial might which the railroads must gear themselves to serve.

### "DON'T BITE THE HAND THAT FEEDS YOU!"

[This paper has long contended that most of the "speed, spit and polish" of over-the-road truck service is reserved for the larger cities and towns where there is enough "cream" traffic to make such an effort profitable. That the smaller community does not always benefit from such service is evident from this editorial from The Torch, a weekly newspaper serving Central Lake, Mich. (population 700) and environs, which has been brought to our attention by the Railroad Cooperative League of Michigan.—Editor]

Are you, the merchants and citizens of Central Lake, biting the hand that feeds you?

You are, everytime you order freight shipped to you by truck, instead of rail. Here is why:

How much money does the trucking company spend yearly in Central Lake in wages, taxes, etc.? The answer is Darn Little!

Now, let's take the Chesapeake & Ohio:

Wages: 7 section men, a track patrolman and the station agent, all residing in Central Lake, receive over \$21,000 in wages each year and most of this money is spent right in Central Lake. Taxes: In 1948 the C. & O. paid Antrim county \$32,000 in taxes. Three-quarters of this

money went to our schools. Service: Your C. & O. freight since the war has improved considerably. There are times when, from certain places, you can receive better service by truck, but only in a few instances.

A couple of weeks ago a truck company representative was in Central Lake trying to drum up business to start a semitrailer load of freight from Detroit to Traverse City overnight five days a week. This trucking company recognizes the fact that its freight service from Detroit to this region is notoriously slow.

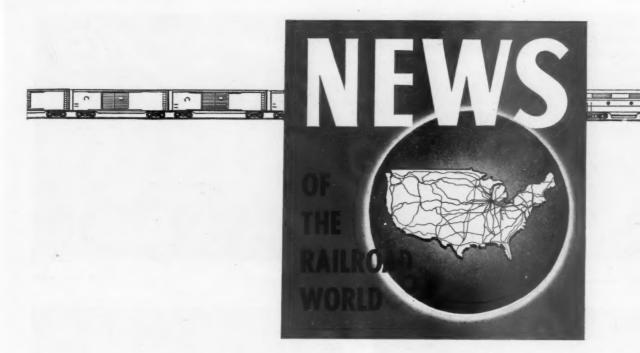
Consider this: Each week the Central Lake Torch receives a bundle of paper from Detroit. This paper is printed there on Thursday and arrives in Central Lake via C. & O. baggage Friday noon at a cost of only \$1.04.

Recently, during the rail strike, this service was shipped as usual, only by truck. It arrived here Tuesday noon and cost us \$2.52! Is this service? No. Is this economy? No.

You, Mr. Citizen of Central Lake, are biting the hand that feeds you.

There is one way to stop this unhealthy practice: The next time you order anything shipped by freight, specify C. & O. freight.

Incidentally, this article was not prompted to be written by the C. & O., but rather by the lack of service and the exorbitant price paid by the Torch last week.



## Railroads Ordered To File Uniform Classification Within Four Months

Further I.C.C. reports in 28300 and 28310 proceedings also promulgate uniform scale of class rates which will be "just and reasonable"

Making further reports in the consolidated-classification and class-rate cases, the Interstate Commerce Commission has ordered the railroads to file within four months a uniform freight classification, meanwhile promulgating a uniform scale of class rates which it found just and reasonable for application in connection with such classification.

There were two commission reports, dated July 26 and made public July 31, which was the "date of service" marking the beginning of the four-months period allowed for the filing of a classification. The reports, both by Commissioner Aitchison, were in the long-pending 28300 and 28310 proceedings, designated, respectively, as Class Rate Investigation, 1939, and Consolidated Freight Classification. The class-rate report was a document of 145 mimeographed sheets, while that in No. 28310 occupied 16 sheets. Their adoption by the commission was unanimous with Commissioner Mitchell not participating.

No. 28310 is nationwide in scope, so the uniform classification which the railroads are called upon to prepare would apply throughout the country. The uniform rate scale promulgated in No. 28300 would apply in all sections except Mountain-Pacific territory. The latter's class rates were not involved in the general case, but are under commission investigation in another pending proceeding—No. 30416.

The commission's present rate action did not prescribe the scale found just and reasonable. However, it has the effect of giving the railroads information which most of them said was necessary if they were to proceed intelligently to the preparation of a uniform classification. As the report in No. 28310 put it, the carriers in Southern and Official territories "took the position . . . that it would be necessary for us to prescribe a scale of rates to which the new uniform classification should conform, before they could comply with their undertaking to make and tender the uniform classification
... "The position of the Western roads, the commission said, was "somewhat different," their reservations being "largely as to the measure of the class

The class-rate scale found just and reasonable is constructed generally along lines of the so-called Appendix A scale with modifications proposed by Southern roads. The Appendix A scale was so designated because it was set out in Appendix A of a "Notice of Proposed Rule Making," issued by the commission in the No. 28300 case on

November 28, 1949 (Railway Age, December 3, 1949, page 57). The Appendix A scale was proposed by the commission as a substitute for the Appendix 10 scale, so-called because it was set out in Appendix 10 of the Commission's original report in the case (Railway Age, May 26, 1945, page 937).

The commission promulgated the new scale by setting out its first-class rates in Appendix 18 of the present report. Presumably, the scale will become known as the Appendix 18 scale. Like the Appendix A scale, it is on a level about 60 per cent higher than that of the Appendix 10 scale, thus reflecting general rate increases authorized after 1945.

#### May Cut Revenues

"Present rates," as set out in another appendix to the commission's report, are as of December 20, 1950, and thus do not include the interim increase, averaging overall about 2.4 per cent, which the commission has since authorized in the pending Ex Parte 175 case. The "present rates" were generally on a higher level than those of the new scale.

The range of "present" first-class rates in Official territory, for example, was from a five-mile rate of 63 cents to a 2,000-mile rate of \$5.62. In Southern territory, the like range was from 67 cents to \$5.78. In Western territory, the range was from a five-mile rate of 58 cents in Zone 2 to a 1,900-mile rate of \$6.70 in Zone 3 and the Southwest.

Estimates prepared by the commission's Bureau of Transport Economics



Double-deck electric train on a run between London and Dartford, England

(See facing page)



The side of one of the English cars at Charing Cross



Dining section in the upper deck of one of the German cars

Authenticated News Photo:



German double-dock electric train at the Frankfurt-am-Main terminal of the German Federal Railways

and Statistics on the basis of 1949 traffic, and included in the No. 28300 record, indicate that the new scale might have the effect of cutting revenues from class-rate traffic by about five per cent, or about \$30 million a year. this connection, a notice in which I.C.C. Secretary W. P. Bartel summarized the reports said that the commission treated the class-rate case "as one for equalization to avoid unduly prejudicial discrimination, not as a revenue level proceeding."

As compared with the Appendix A scale, the new scale is the same for distances up to 600 miles. Thereafter, it runs from two to 45 cents higher. The commission emphasized that its action in promulgating the scale did not preclude "any requisite modifica-tion" which "facts" developed subse-quent to submission of the uniform

classification may indicate.

#### Gives Needed Basis

"But," the report added, "it furnishes the respondents with the basis they have urged (with the support of many shipping interests) they must have in proceeding to the formulation of the new classification. Change, however, in those findings, should not be sought or expected prior to the making, filing, and acceptance of the new classification, in view of the elaborate showing that has been made by the respondents at the present and in the earlier phases of this proceeding. General changes in the rate level may be taken care of in appropriate revenue cases of general application. They cannot be foreseen or appraised and given weight in this proceeding.

"We endeavor in this process of selection to weigh the proposals of the carriers, and their existing rates so as to conform the scale as closely as is feasible to what for want of a better term may be considered as the mean of the existing scales and the various proposals. . . . In general we have accepted the scale proposed by the Southern carriers, without, however, accepting the conditions with which

those carriers sought to surround it. . . . The Southern carriers undertook to leave to the Western carriers the naming of interterritorial rates between the Western district and the South . . . but the scale we find is intended for interterritorial as well as intraterritorial application. . . .

The commission went on vise that it does not intend the present findings to be construed "as indicating the necessary or proper adjustment of rates to be made in other proceedings involving class rates that are now before us." It is also noted that the new scale's rates for classes other than first class will be constructed on the basis of percentage relationships to first class, as prescribed in the original reports.

As summarized in the Bartel notice, the present 28300 report also "elaborately analyzes the financial and operating conditions of the Western lines, compared with the railroads in other territories, and finds no such difference as would warrant the request of the Western roads for a high-

er zone basis of rates."
"The report," Mr. Bartel said further, "leaves the Eastern carriers to bring forward and justify their suggested modifications [of the rate scale] when the new classification beeffective. The expectation is comes that the classification and scale will go into effect simultaneously, but they will be subject to possible suspension

for investigation of portions thereof. "Exception ratings, if now considered as undesirable, may be removed as they were made—by the railroads filing proper tariffs. Ocean-rail rates, involved in the class-rate case, are being heard separately, and are not affected by the present decisions. Various short or 'weak' lines of railroad sought arbitraries, and these have been given tentative approval.'

The report in No. 28310 said that the railroads more than six years ago -in June 1945-gave the commission "assurance that they would make and tender a uniform classification based

upon the findings" in the original report in the case. "Nothing in the record," the report also said, "indicates that the respondents did not in good faith undertake and make much progress in the task of revision and formulation of the new uniform classification. .

The commission went on, however, to refer to the railroad contention that was necessary for them to know

what the new rate scale would be.
"The respondents have stated," the report continued, "that after the scale has been determined by us, four months' time would suffice for their completion of the task and for filing of the new classification. This esti-mate as to the reasonable time for performance is corroborated by other informed-opinion testimony.

"The present duty of the respondents under the act is clear: They should proceed without further delay to complete, publish, file, and put in force the just and reasonable uniform classification which we have found is necessary to clear away unjust and undue preferences and prejudices . . The suggestion of the Western respondents that we should defer the uniform classification until we have prescribed the class rates for Mountain-Pacific and transcontinental traffic, would lead to further impasses in procedure and unnecessary delay of indefinable duration. . . We cannot accept the suggestion.

#### Provides 30 Classes

"We are not now passing on the propriety of any particular item in any of the classifications or in the proposed classification. All who may be concerned will have their rights preserved, whatever they are. It will apparently be necessary to continue in effect the existing consolidated classification and its supplements, pending adjustments and the ascertainment of reasonable rates in other territories, unless the carriers in the meantime themselves adjust their class rates to the new classification. Therefore, do not now enter an order to cease and desist from the use of the existing classifications."

The order accompanying this report stipulates that the uniform classification to be filed "shall conform to the findings heretofore made in this proceeding and set out in our original report . . ." That would seem to call for a classification embracing 30 numbered classes, seven of them above Class 100 or first class and 22 below it. The classes in such a set-up would be the following: 400, 300, 250, 200, 175, 150, 125, 100, 92.5, 85, 77.5, 70, 65, 60, 55, 50, 45, 40, 37.5, 35, 32.5, 30, 27.5, 25, 22.5, 20, 17.5, 16, 14.5 and 13.

While procedures contemplated by the two present reports are running their course, the commission is suspending further proceedings under the so-called "rule-making" phases of the two cases. The rule-making phase

#### British and German Railways Try Out **Double-Deck Cars on Electric Lines**

(Illustrations on facing page)

In the course of postwar reconstruction, the German Federal Railways are modernizing rolling stock. One recent innovation is a "two-story" train being tried out on the Frankfurt-Cologne-Dortmund run, some 212 miles. It consists of three double-deck cars which are 73 ft. 6 in. long, with a total seating capacity of 300 persons in thirdclass, and 40 in second-class, service. In the upper deck of one of the cars there is a dining room operated by the German Sleeping & Dining Car Co.

The train weighs 110 metric tons (220,-000 lb.).

Some of the features are higher speed, smoother operation, comfortable upholstered seats, improved ventilation, and fluorescent lighting.

The four-car British train shown on the facing page has a seating capacity of 552 persons; each car carries four passengers for every three on the single-deck electric cars. The cars are designed to relieve overcrowding on congested sections of railroad.

of No. 28300 had been under way since the commission issued its November 28, 1949, "Notice of Proposed Rule Making," which promulgated the Appendix A scale and gave railroads and other interested parties an opportunity to "shoot at" that scale.

The rule-making phase of No. 28310 had been under way since August 17, 1950, when the commission issued another notice to give an exhibit filed in 28300 the status of a "tentative uniform classification" for the purpose of progressing the 28310 case. This was the so-called Greenly exhibit, purporting to show only "tentative ratings under consideration" by Eastern and Western roads; it was filed on behalf of the Eastern and Western lines by A. H. Greenly, chairman of the Official Classification Committee. (Railway Age, September 2, 1950, page 75.)

The commission, the 28310 report said, has determined that, "without waiving what has been done" in the "rule-making" stages, it should "hold further proceedings therein in abeyance, and that instead the course (indicated by the present reports) should

be followed."

#### New Group Will Study Tariff Improvements

Railroads approve proposal sponsored by N.I.T. League

Traffic executives of railroads in the three general territories have approved plans for appointment of a fulltime research group to study ways and means of simplifying and otherwise improving railroad tariffs. This was announced August 3 by chairmen of the regional traffic associations and by Edward F. Lacey, executive secretary of the National Industrial Traffic League.

Mr. Lacey's announcement, which was a circular to league members, predicted that results of the research "will eventually save carriers and shippers alike millions of dollars annually." The executive secretary also noted that the research idea has been sponsored by the league's committee on rate construction and tariffs, which "will collaborate with the rail group" and participate in "periodic joint meetings as the occasion requires." The committee's chairman is John W. Peters, traffic manager of the Delco-Remy Division of General Motors Corporation.

#### Faces Difficult Task

The research group will be expected to make "specific recommendations," Mr. Lacey said. At the same time, he called the group's task a "difficult" one; so "no one can foretell how much time will be required to complete this undertaking." The announcement also revealed that the research group will consist of three persons.

As to the Interstate Commerce Commission's reaction, Mr. Lacey reported that "Commissioner Alldredge, who is in charge of the Bureau of Traffic, has evidenced considerable interest in this subject, and we are assured of his

wholehearted cooperation."

"The traffic executives," Mr. Lacey also said, "have been very sympathetic and cooperative respecting this project, and have indicated a genuine desire to undertake to accomplish the objective, and have approved the plan. To that end, the traffic executives in the three general territories have ap-

pointed a special group of nine, of which Fred Carpi, vice-president, Pennsylvania, is chairman (for the first year), in cooperation with W. H. Dana, J. G. Kerr, and John J. Fitzpatrick, chairmen, respectively, of the Western, Southern and Eastern Traffic Executive Associations, to employ a full-time competent group to undertake this survey. . . . "The headquarters for the research

"The headquarters for the research group will be established in Washington, D. C. Announcement of its personnel and information as to whom and where suggestions for tariff improvement should be mailed, will be

made shortly. . .

"The railroads are to be congratulated upon their willingness to undertake this project. Much credit is due also to the league's committee . . . and particularly to its chairman, Mr. Peters, for their untiring efforts in advocating this study and survey."

#### N. W. Shippers Find Grain Trucking Disruptive

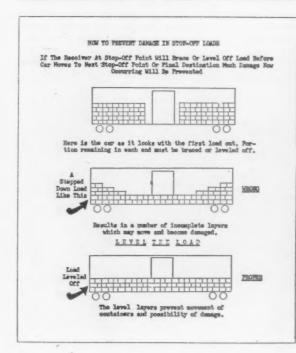
Amidst a series of reports and discussions which centered on the one item shippers in the area are most concerned about right now—crops and how they'll move—members of the Northwest Shippers Advisory Board, meeting at Rapid City, S.D., on July 26, nevertheless felt impelled to take time from crop reports to discuss the great inroads made by trucks into movement of off-farm crops.

The question came up when it was reported that the Southeastern board had experimented with the idea of making the advisory groups serve all forms of carriers (Railway Age, July 9, page 8). The Northwest board appointed a committee, comprising the vice-chairman for each of the four states in the area, plus General Chairman L. E. Luth, director of traffic of Gould National Batteries, Inc., to look into the matter of extending its activities to include other agencies of transportation than the railroads.

#### "Axle-Grease" Money

The board then went on to weigh the importance and effect of trucking of grain. Statements on the floor left no doubt that the volume is big and growing. Mr. Luth remarked that, compared to it, the move for transcontinental truck rights by Pacific Intermountain Express is "penny ante stuff." Most speakers agreed that trucks seek grain because its movement exempts them from regulation, while its direction from country elevators to terminals gives them return loads. They carry it "for axle-grease money." Several members remarked that all kinds of vehicles are in the eastward grain movement, including even carriers of new automobiles, the open-sided trailers of which are boarded up for grain handage.

haulage.
P. F. Scheunemann, traffic manager of Peavey Elevators, expressed the opinion that truck movement disrupts



LOADING STOP-OFF CARS is but one of many topics covered in the study of packaging, handling and transportation of canned goods recently published by the railroads of California (Southern Pacific, Western Pacific, Santa Fe and Union Pacific) and the Association of American Railroads. The findings of this study are contained in a well-illustrated, 39-page booklet entitled "Canned Goods Survey," obtainable through the Freight Claim Division of the A.A.R. at 59 East Van Buren street, Chicago 5

the grain trade and works ultimately to the farmers' loss. The trucks are not interested in moving grain out of the elevators; therefore transiting arrangements are impossible. H. W. Bishop, chairman of the board's executive committee, and traffic manager of Nash Finch Company, said the problem in this type of trucking arises chiefly from exemption from regulation on the ground of agricultural commodity. He felt it was bad for the grain trade because it would raise costs on grain which the railroads would continue to haul. "We shippers will have to pay for them somehow." He asserted also that continued diversion of grain to trucks might inhibit railroad management from buying and building as many new cars as otherwise.

In answer to a question raised on the floor, R. E. Clark, manager of the Closed Car Section of the Car Service division, of the Association of American Railroads, said his experience in the Southwest indicated that railroad car supply had no bearing on the trucking of grain, since trucks hauled large quantities to Gulf ports, while "thousands of box cars stood untouched at the elevators." He thought the cause was a "few cents difference in the rate." Mr. Scheunemann was appointed to investigate the extent of grain trucking and the need, if any, of recommendations for regulation of it.

#### Big Grain Crop Expected

According to reports presented, the four-state area of the board will produce a big grain crop, starting within a few weeks. Movement of this crop will be affected directly by a number of factors: (1) Major terminals serving the Northwest are well-filled Duluth being described as "practically plugged." (2) Since lake vessels find ore movement more profitable than grain, there is little likelihood that the carrying fleet will be increased to "unthe terminals. Thus more cars will have to move with their originated grain to more distant markets, with consequent longer turn-around. (3) As a contrary pressure, it was reported that "the current market on wheat is under the loan value and many farmers may take out loans and thereby keep the wheat in elevators or on farms." Charles Johnston, representative of the Commodity Credit Corpora-tion, said "We expect most of the '51 crop to go under loan—most of it to be stored on the farm." The fact that terminal elevators are already full in-dicates also that railroads will not move as much grain as the predicted crop might indicate. (4) According to Mr. Clark, the Northwest would have an adequate car supply for its grain loadings (Railway Age, July 30, page 46).

#### Comments on L.C.L.

Both the committee of railroaders and that of shippers set up to study movement of l.c.l. decided not to go along with certain other boards in advocating delegation of routing author-

ity on merchandise to the initial railroad. Reporting for the railroads, E. W. Ledin, supervisor of merchandise traffic for the Soo Line, gave it as the concensus that the "purpose of good service is to attract traffic" and that railroad-routing would cancel out the value of good service by intermediate lines. Philip Halverson, chairman of the board's committee on l.c.l. transportation, and traffic manager of Our Own Hardware Company, charged the carriers with being "lax in solicita-tion of l.c.l." He advocated greater publicity for merchandise schedules which roads have already publishedasserting that their distribution "has definitely increased tonnage." He believed that those railroads which do not issue merchandise schedules indicate they do not seek patronage. George Hunt, traffic manager of Butler Brothers, reiterated his previous "admonition" that railroads in board territory should "put split deliveries in their tariffs" to encourage pooling to break bulk points. He referred to the ex-cellence of l.c.l. and pooled carload service on the Missouri Pacific.

Several shippers complained that some railroads fail to switch cars made empty over the weekends. They asserted they were paying their own forces overtime to work weekends, loading and unloading, but that the railroads would not switch the cars after disposition had been given. "We shippers don't want to go half-way and find nobody there to meet us," said one.

In a luncheon speech titled "Black Hills—Yesterday, Today and Tomorrow," F. G. Fitz-Patrick, vice-president—traffic, of the Chicago & North Western, described the growth of traffic in bentonite from the Black Hills as an example of traffic development by a railroad. In 1935 only a few cars of this versatile, claylike commodity were

#### MORE NEWS ON PAGE 79

Additional general news appears on page 79 followed by regular news departments, which begin on the following pages:

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produced in the area. Last year, about 10,000 carloads went out of Belle Fourche, S. D., to industrial markets all over the country. In 1948 the North Western built an 18-mile extension of line into Wyoming to new bentonite beds—one of the most reent new rail-road routes in the country.

#### U.P. Tests Anchor Plates For Steel Strapping

For test purposes, the Union Pacific has installed flush-mounted anchor plates for steel strapping in 77 new box cars currently coming off the assembly line of its Omaha (Neb.) shops. The test involves installation of these plates in three different patterns to determine which is the most effective for strapping bulkheads—as well as lading—to prevent damage in transit.

The patterns under test are based on a study by the loss and damage prevention section of the general claims department of the road. Nine to fourteen of the plates have been mounted in the sidewalls of the cars (Continued on page 79)



FLUSH-MOUNTED STEEL STRAPPING ANCHOR PLATES being tested in three different installation patterns by the Union Pacific. In this particular pat-

tern, each sidewall of the car has 54 such permanent plates placed for convenient use in bulkheads—or lading—with steel strapping

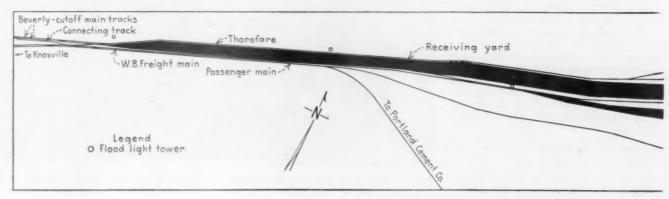


CLASSIFICATION YARD—A master retarder in the foreground, and any one of six other retarders below it, slow cars down to coupling speed as they move to any of 46 classification tracks

#### The Southern's John Sevier Yard . . .

## An Integrated Freight Terminal

Average of 8 hours transit time saved by latest methods and devices, such as coded, push-button classification routing, radar, Speed Meters, "Dick Tracy" radios, and fast waybill handling



In contrast to the original layout, which had two receiving and two classification yards but no departure yard, the new

To woo more business by giving the fastest possible service between shipping point and destination, to contribute to the national defense effort by speeding government traffic—sans "bottlenecks"—and to cut unit costs by greater efficiency—the Southern has spent \$3 million in making its freight classification yard at Knoxville, Tenn., "the most modern in the South." Known as the John Sevier yard, this important freight terminal has been rebuilt with no interruption to railway service. The original yard was divided into two major units-one for eastbound and one for westbound traffic, the classification of cars being done on two separate humps. Switches were thrown by hand and car riders braked the cars as they rolled into the classification yards. In contrast, the new yard is a single integrated layout planned for the uninterrupted flow of freight cars from inbound trains, through a new "push-button" humpretarder classification yard and into outbound trains with the least lost motion. Even radar has been employed.

The new yard embraces a 12-track receiving yard at its west end, a 46-track classification yard, a 10-track forwarding yard, a car-repair yard containing 4 tracks, a local yard and various towers and buildings. Merchandise transfer sheds and tracks, as well as shop facilities that served the old yard, have remained virtually unchanged, but new and more conveniently located stock pens and refrigerator car icing facilities have been built.

#### Receiving Yard

The receiving yard, which is the most westerly unit in the yard layout, is so designed that trains from either direction can pull into the yard, and locomotives can run (through underpasses) to terminal maintenance facilities without interfering in most instances, with humping operations. Six of the 12 receiving tracks can each accommodate from 67 to 76 45-ft. cars, plus a four-unit diesel locomotive and caboose. On the same basis the other six tracks have car capacities ranging from 145 to 153.

The nerve center of yard operations is located at the yard office on the hump. From his vantage point at the top of a tower in this building, the terminal trainmaster can see and direct the work of the entire yard. In other offices in the same building a telegraph operator keeps posted on the arrival and departure of trains; a train clerk checks incoming trains from the East; and a scale clerk weighs cars as they move across the hump, and sorts, in a circular file, the waybills representing the cars. Here waybills are collected for outgoing trains and the other paperwork involved in yard operation is done.

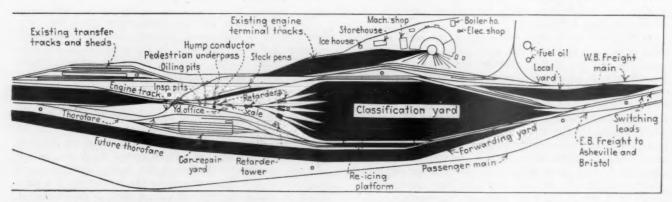
North of the main yard office and tower lie the new stock pens and the set-out tracks for stock cars and cars containing explosives or other commodities which cannot be humped. South of the tower is the new repair yard where running repairs are made to cars that the inspectors discover to be "bad order." Concrete-paved workways extend around the repair tracks. Work equipment here includes a crane car, air-driven jacks and power tools, as well as a large supply of wheels and parts. Aluminum tubes, sprouting from the yard office, lead to the west end of the yard and to the car-retarder operator's tower several hundred yards east of the main tower. These tubes form a pneumatic system for conveying waybills, mail and other documents between various points in the yard.

#### Pneumatic Tubes Carry "the Mail"

The pneumatic tube system contains seven lines, four of which are 4-in. by 7-in. oval tubes while three are of 3-in. round tubes. They are so designed and located that waybills from the west end of the yard may be transmitted to the yard offices; pouches containing bills on cars to be worked or forwarded from the transfer shed can be handled between the yard office and the transfer office; mail handled by railroad bus between Knoxville and John Sevier can be transported between a point convenient to the bus route and the yard office; and other mail can be handled between the main yard office and the ditto clerk on the third floor, between the main yard office and the hump conductor's office, between the hump-yard office and the terminal trainmaster on the fifth floor, and between the main yard office and the retarder operator.

All of these lines are of the pressure-vacuum type, which means that, from the central location in the general yard office, all carriers are forced out through the tubes by pressure and returned from the outlying points by vacuum. This change in pressure is brought about by reversing the direction of the rotor operating the system. Aluminum was used for all exterior tubings and fittings because it eliminates the necessity for painting or other protection from the elements. The average speed of the carriers operated through these tubes is 30 ft. per sec. The longest run is 9,200 ft. between the west-end clerk's office and the general yard office.

The track over which strings of cars are pushed up to the hump—and then "cut" to roll down into the classification yard—passes within a few feet of the yard office and tower. As the cars are shoved from the receiving yard toward the hump on this track, they first



John Sevier terminal at Knoxville, Tenn., has single receiving and classification yards, and a forwarding yard



CAR INSPECTION AND OILING—Inspection pits (middle distance) afford excellent vantage points from which inspectors watch for car defects. Hot oil applied by pressure gun at oil racks (foreground) replenishes journal boxes



MAIN YARD OFFICE—Located at crest of hump, this is the nerve center of the yard. The terminal trainmaster "oversees" all from his fifth-floor office in the tower and the scale clerk "weighs" the cars from his cupola at the lower left

pass over a dragging-equipment detector. They next pass between two car-inspection pits constructed partly in the ground so that a car inspector's eye level is about the same as the top of the rail, from which vantage point he can see clearly the most important parts of the cars. If a defect is found which has not been previously noted, the car inspector presses a foot pedal, thereby spraying whitewash onto the truck sides. This whitewash is in effect, a bad-order tag. At the same time the car inspector notifies the hump conductor so that the car may be diverted to the bad-order track.

The cars next pass a hot-oil rack. Men stationed on each side of the track raise the journal box lids and by means of a pressure gun connected to the heater and oil-reservoir tanks apply the proper quantity of hot oil to the journal boxes.

#### Switches and Retarders

From an office at the crest of the hump the hump conductor directs the pin pullers and operates the automatic switching machines which line up all switches to enable a car or a cut of cars to reach the desired classification track.

Just below the crest of the hump, there is a short retarder,  $27\frac{1}{2}$  ft. long, which provides: (1) automatic control for retardation of cars to proper speed over the track scales (maximum 4 m.p.h.); and (2) manual control to assist in uncoupling cars on which the cut level or pin will not release easily because of stiffness, in which case slack is required.

On the lead down the incline below the scale is the main retarder which includes three sections, each 44 ft. long. The sections of this retarder can be controlled independently or all at once, as desired. Below the lower end of the main retarder, switches connect to six subleads, each of which connects to a group of tracks with 7 to 8 tracks in each group, making a total of 46 classification tracks. On the track leading to each group, there is a two-section retarder 99 ft. long, which can also be controlled in sections or as a whole. Each of these 99-ft. retarders is used to slow the cars down to proper coupling speed as they pass on down into the classification track. As a whole, the yard includes 16 retarders.

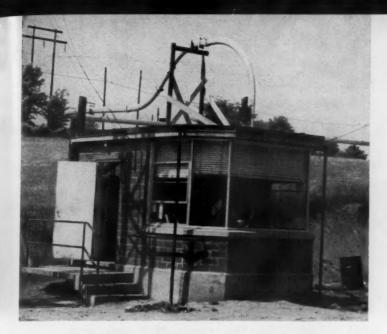
The short retarder just below the crest is controlled locally at the hump as previously explained. The re-

maining retarders are controlled from one machine in a tower on the south side of the yard near the throat. In this tower the panel of the retarder-control machine contains a schematic diagram of the tracks, switches and retarders. Indicating lamps are located in the lines representing tracks. When a car, or cut of cars, approaches a switch over which it has been routed by automatic switching control, its selected route is indicated to the retarder control towerman by progressive lighting of the indicating lamps.

On this control panel, each retarder is represented by a toggle switch which can be operated to control the retarder to the open position or to either of two other positions giving successively greater degrees of retardation. The switch list shows whether a car is loaded or empty and, if loaded, the character of the lading, so that the towerman can estimate the retardation required. He judges the speed of the approaching car by sight and sound and sets the retarder accordingly. Another feature of the installation is a new adaptation of radar to control devices that indicate, in miles per hour, the speed of cars when approaching the last retarder in each route. The power switch machines, the power retarders, the automatic switching system control, the central control machine for retarders, as well as the hump signals and the dragging-equipment detector, were furnished by the General Railway Signal Company.

#### "Push-Button" Classification

The 47 switches in the classification yard are each operated by a high-speed 110-volt d.c. machine which operates the switch in 0.6 sec. These machines are controlled by the G.R.S. automatic switching system, which, briefly, is an arrangement whereby the switches in a classification yard are controlled automatically by cars on track circuits, after the control for each car or cut of cars has been initiated by the operation of a push button. These push buttons-one for each of the 46 classification tracks-are on a sloping panel on the desk in the office at the crest of the hump. As a car, or cut of cars, approaches the hump, the hump conductor consults his switch list and presses the button for the yardtrack to which the car, or cut of cars, is to be routed. The switches automatically line up ahead of the car to route it to the proper track.



YARD OFFICE AT WEST END—This building is headquarters for clerks who make Dictaphone recordings and switch lists of inbound eastward trains and dispatch them by pneumatic tube to the main yard office



CONTROL OF SWITCHES—The power switches in the classification yard tracks are controlled automatically by cars on track circuits, after the control for each car or cut of cars has been initiated in the hump conductor's office

Car capacities of the classification tracks range from 25 to 58 cars, and the aggregate capacity is 1,850 cars. The longest tracks are those in the center since the two switching leads at the east end of the yard come together at the end of the yard to a connection with a track leading into the forwarding yard. The 10 tracks of the forwarding yard range in capacity from 68 to 154 cars, plus a four-unit diesel locomotive and caboose. Six of them will hold more than 100 cars each; three of them more than 150.

A special yard is provided for making up local freight trains and for switching cars destined for delivery to industries around Knoxville. Stock pens, icing facilities and car repair yard are all centrally located. The classification track and two storage tracks designed to accommodate cars destined for the l.c.l. transfer shed are located conveniently near the transfer. The whole yard, in fact, fits together like the pieces of a jigsaw puzzle.

During the hours of darkness in the round-the-clock operation, John Sevier yard is bathed in light from floodlights mounted on a dozen strategically placed steel towers, some as much as 100 ft. tall. Additional lights mounted near ground level illuminate passing trains for the benefit of the train clerks. There are also fog lights at the master car retarder and a series of lights on the icing platforms.

#### A Closely-Knit Operation

Radio and telephone communication, intercommunication systems and loudspeakers knit the yard operation together—day or night. High towers, strategically located, are an aid to the hump conductor, general yard-master, and retarder operator. In addition, track circuits were installed to control track-occupancy indicators to inform these men of the exact locations of cars when at strategic points.

Circuits on the turnouts to the classification tracks control indicators which tell the retarder operator when cars have not passed beyond the clearance point. Track circuits at the west end of the tracks in the departure yard control lamps at the east end of this yard to indicate to switch crews when they have shoved cars to a point eight car lengths from clearance at the west end. Circuits on tracks in the receiving yard control lamps on the panel in the general yardmaster's office at the

hump to show which tracks are occupied. Occupancy of tracks in the forwarding yard is similarly indicated on a panel in the yardmaster's office at the east end.

Lamps and buzzers in the offices, controlled by track circuits, announce the approach of trains on main tracks. Yard-track indicators are located along the main tracks at the entrance to the receiving yard. Each of these indicators separately controls illuminated numbers, one for each track in the receiving yard. When a train is approaching, control from the general yardmaster's office causes the indicator to display the number for the track on which the train is to enter the yard.

#### Communications Include Radio

The seven diesel locomotives used in this yard are equipped with two-way radio. These locomotives are used interchangeably in three different services and, therefore, the radio is arranged to operate on any one of three frequencies. The fixed radio station is at the hump.

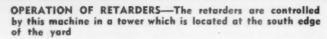
When a hump engine is pushing cars from the receiving yard up over the hump, radio is used between the engineer and the hump conductor. The fixed station is unusual in that, when not in use for communication purposes, an electronic device causes the radio to transmit a tone for one-half second, at 10-sec. intervals. These "beeps" are heard by the engineer, and are an indication that the radio is in operating condition.

When yard locomotives are being used to pull blocks of cars from the classification tracks and assemble them in trains in the departure yard, these moves are to be directed by a so-called "Dick Tracy" miniature radio used by the conductor as he walks about the yard directing this work. In order to minimize the weight of these portable sets, they include transmitters only. Thus, the conductor can talk to his engineer, but the engineer cannot reply. Other Dick Tracy transmitters are to be used in the local yard. The radio on the locomotives and at the fixed stations was made by Westinghouse, and the Dick Tracy lightweight portable sets by the General Railway Signal Company.

Railway Signal Company.

The new yard includes several talk-back loudspeaker systems. A console in the general yardmaster's office at the hump is connected to 120 talk-back and 30 paging speakers. A similar system with fewer units is used at the lower end of the yard. A third includes talk-back







FINAL RETARDATION—This retarder, 99 ft. long, gives final control of the speed of cars going to any of a group of eight classification tracks

speakers for direct communication between car inspection pits and the humpmaster's office. In addition to the customary mounting of talk-back speakers on short posts, the Southern developed "dwarf-mounted" speakers for use at switchstands, and "groundline" speakers which are mounted on the ends of ties for use where clearance between tracks is not sufficient for locating a post.

between tracks is not sufficient for locating a post.

The yard also includes a novel "party-line" adaptation of talk-back loudspeakers for communication between any two such speakers without going through a central office. For example, a car inspector in some part of the forwarding yard may want to talk to some other car man at the other side or far end of that yard. To meet this need, a separate system was installed with talk-back speakers at 300-ft. intervals in the forwarding yard, all of these devices being connected to one common operating circuit with no central office.

#### Speaker Becomes Microphone

When a man depresses a foot switch at any talk-back location, the speaker is converted to a microphone, and nearby loudspeakers are muted. Speech into the microphone is amplified and heard on all the unmuted loudspeakers in the entire forwarding yard. An added feature is that, by operating the foot switch three times in rapid succession, the general yardmaster can be signaled to come in on this special talk-back system. A similar private system with talk-back speakers, 600 ft. apart, is in service in the receiving yard.

These mechanical and electronic safety devices contribute to the safe and rapid handling of the approximately 30 inbound and 30 outbound trains a day that operate through the yard. The car count, inbound and outbound combined, averages 3,000 to 3,500 cars a day, and it is not unusual to have 2,000 cars go over the hump in a 24-hour period.

hump in a 24-hour period.

Approximately 40 per cent of the inbound cars come from the East, three fourths of them from the Asheville (N. C.) line and one-fourth from Bristol, Va. From the West there are three principal sources of incoming cars: Chattanooga, Tenn., (20 per cent); Knoxville and the connection there with the Louisville & Nashville (14 per cent); and the connection at Oakdale, Tenn., with the Cincinnati, New Orleans & Texas Pacific (17 per cent). The lines to Jellico, Tenn., and Middlesboro, Ky., are the source of 8 per cent of the inbound traffic. Traffic leaving the classification yard follows roughly the same

distribution pattern, although the percentage of traffic that goes in each direction differs slightly and about 15 per cent of the cars classified are destined to John Sevier yard itself. These comprise cars for the merchandise transfer shed, cars of company material for the shop and enginehouse, and bad-order cars for the repair yard.

Cars are sorted in the classification yard not only with an efficiency that promises time savings in John Sevier yard itself but with a thoroughness that will make for greater increases in the speed of car handling at other points on the Southern where freight trains from Knoxville formerly had to be reclassified completely for further movement. In short, the thorough and detailed sorting of cars at the new yard reduces the switching work that had formerly to be done at other points. In contrast to the 10 general classifications that used to be made, the yard now sorts cars into 29 different line-of-road classifications—9 for the Asheville line, 6 for Bristol, and 7 each for the Chattanooga and Oakdale directions. This total includes a separate track for each local.

The remaining 17 tracks in the classification yard include seven tracks for cars to be delivered to business and industrial establishments in the Knoxville area by the seven switch engines assigned to those runs, one track each for refrigerator cars (located alongside the icing platform), for cars destined to the Volunteer Portland Cement Company, "hold" cars, cars for the L. & N. interchange, cars of company material, coal cars, empty coal cars, cabooses, bad-order cars, and finally one track of miscellaneous assignment.

#### **Construction Details**

During all the construction and installation work on the new yard the old yard remained in uninterrupted operation. Grading was done on contract with conventional earth-moving equipment. When wet weather hampered progress, draglines worked from the tops of cuts, where some footing for the machines was to be had, loading the earth into  $2^{1}/_{2}$ -yd. to 3-yd. light dump trucks which moved it out over roads of stone and slag especially constructed for the purpose. During periods of favorable weather, which were infrequent, the subballast was conveyed to the roadbed by trucks from a central unloading point where the ballast was dumped from hopper and ballast cars through a conventional opendeck trestle to a stock pile beneath. This material was in turn loaded into dump trucks by means of an Ather



EAST-END YARD-OFFICE TOWER—Affords general view of all operations involving pulling of classification tracks and make-up of trains in the departure yard

loader. Finished grade on which to lay track was obtained by the use of sand unloaded from gondola cars by clamshell-equipped cranes operating on the last track which had been constructed.

With the exception of the turnouts at the east end of the receiving yard leading to the hump lead, the hump lead itself, and the turnouts in the west end of the classification yard to which the hump lead is connected, practically all materials were secondhand, either shifted from track in the old yard or obtained from inventory. Much of the track shifting occurred when the grading operation reached the edge of the old yard, where it was, of course, necessary to move the tracks for the grading work to proceed.

Wherever possible, the old track was loaded bodily onto the floor of flat cars, using three, 10-ton, crawler cranes. A string of approximately 30 cars was used for this operation. The brake staffs of these cars were disconnected and dropped down so as not to interfere with placement of tracks on the cars. In many cases a second section of track was loaded on top of the first. Then the entire cut of flat cars was moved from the old yard over to a previously built track in the new yard, which lay adjacent to a roadbed prepared for the track being moved, and the old track was then unloaded by the same cranes. After this, slewed or missing ties were replaced, the track was ballasted, and then surfaced.

Complete turnouts were also moved in the same manner. It was found that, even with a cut of 25 to 30 flat cars, no difficulty was experienced in traversing turnouts or stiff curves. To prevent ties falling into the space between the cars, light wooden pieces were placed across the gaps between the cars and underneath the ties. To facilitate loading, steel skids were fabricated of very light rail sections. They were of sufficient length to run from the floor of the car to about the ends of the ties on the track to be loaded and were secured by welding a spud at the upper end which fitted into the stake pocket of the flat car.

Where new tracks had to be constructed, ties were conveyed to the track site by truck after having been loaded by crane. For this operation one-ton and 1½-ton flat-bed trucks were used, on each of which a steel frame had been constructed and so placed that it was free to slide from the front of the bed to the rear. The frame was controlled by a power winch mounted immediately behind the cab and just forward of the truck bed. By attaching a cable to the frame and running it

around a pulley at the rear of the truck, the frame could be moved backward or forward over the bed of the truck.

The ties were loaded with the frame in position immediately behind the cab and were laid crosswise to the truck bed. Thus they were conveyed to the track site and unloaded. To unload the ties the winch was set in motion, causing the steel frame to move toward the rear of the bed and to push the ties off the rear of the truck and onto the roadbed as the truck moved ahead. Other track material, such as bolts, nuts, frogs, and tie plates, was also trucked to the site and distributed as the truck moved alongside the track. Generally speaking, track centers are 14 ft., with all clearances conforming to Tennessee state regulations.

Rail was handled by 1½-ton flat-bed trucks, each towing a conventional pole trailer with one end of the load of rails resting on the bed of the truck and the other end on the trailer. The rail was loaded by crane from cars or stock pile and unloaded by means of a Hystaway crane which took the rail off the truck and pole trailer and set it directly on the previously unloaded ties. Coupling of the rails and spiking were accomplished by use of conventional bolt tightening machines and mechanical spike drivers. Ballast was hauled by dump trucks and leveled down to the top of the rail by bull-dozers prior to surfacing. This ballasting operation was performed before the ties were distributed for the adjacent track. Tamping to grade was done by a 12-tool electric tamper outfit working in conjunction with power jacks.

John Sevier yard was designed and constructed under the general supervision of J. B. Akers, chief engineer of the Southern system. Except for the grading and drainage work and for the construction of the new engine underpass, which were done under contract, most other construction work was performed by company forces under the direction of G. H. Echols, chief engineer, maintenance of way and structures, Central lines, and a resident engineer, assisted by supervisory employees of the track, bridge and building, signal and electrical departments.

#### Partial List of Materials and Equipment Used in John Sevier Yard

Used in John Sevier Tara
Automatic-switching and re- tarder devices
Building materials and tile workNational Fireproofing Corporation, Birmingham, Ala.
All glass and store-front metal, installedPittsburgh Plate Glass Company, Knoxville, Tenn.
Corrugated cement roofingPhilip Carey Company, Cincinnati, Ohio Acoustical Transite ceilingsJohns-Manville, Atlanta, Ga. Plumbing fixtures and
equipmentCrane Company, Knoxville, Tenn. Drinking fountains; miscellane- ous electrical equipmentGeneral Electric Supply Company, Knoxville,
Tenn.  New self-guarded frogsFrog, Switch & Manufacturing Co., Carlisle, Pa
Rail
Creosoted cross and retarder ties
Concrete pipes
Metal pipesArmco Drainage & Metal Products, Inc., Atlanta, Ga.
Metal pipes
Scale, with Streeter-Amet automatic recorder Fairbanks, Morse & Co., St. Johnsbury, Vt.



1. CAR INFORMATION RECORDED—Yard clerk records car initials and numbers with a Dictaphone as an inbound

train passes the main yard office. He then selects classification track for each car with the help of a card index

#### The Southern's John Sevier Yard . . .

## How Its Modern Facilities Speed Classification

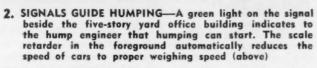
"Case history" follows an arriving train through receiving yard and over hump into classification tracks —Make-up of trains for departure also described

Perhaps the best way to describe the operation of the Southern's John Sevier yard at Knoxville is to see in detail what happens to a train arriving in the yard, from the East, for example. Action begins with a warning signal that flashes in the office of the telegraph operator on the ground floor of the yard office when the incoming train crosses a track circuit at the approach to the yard. With a line-up of incoming trains before him, the operator knows the train number, where it's coming from and how many cars it has. He buzzes the terminal trainmaster over the "intercom" to get a track assignment to be relayed to the train crew. Checking the indicator

panel on his desk to see which receiving yard tracks are clear, the trainmaster assigns a track. The operator then turns a knob to light up the number of the selected track on a signal indicator at the east end of the receiving yard and the train crew throws the switches to guide the train into that track.

As the train rolls past the yard office on the inbound freight lead, the train clerk in his third floor observation post snaps on a Dictaphone near his desk (Picture 1) and begins to call off such information as the engine number, origin of the train, the receiving-yard track assignment, and finally the number, initial and a "thumb-





- 3. GIVING THE ONCE OVER—As each car approaches the hump its most important parts must pass the scrutiny of a car inspector watching from a pit on each side of the track. Defective cars get a splash of whitewash sprayed on truck sides by pressing a foot pedal (above right)
- GET HOT OIL, TOO—After passing the car inspectors' pits, each journal box gets a "shot" of hot oil squirted from pressure gun operated by an oiler on each side of track (right)

nail description" ("empty box car," "loaded gon," etc.) of each car as it passes. As the caboose eases by, the train conductor swings off and places his waybills in a carrier which the clerk hoists up to his office.

#### Dictaphone and Station Index Helpful

Turning the Dictaphone to "playback," the train clerk checks the waybills against his own reading of the passing train (there should be a waybill for every car) and sees that they are arranged in train order. From the waybills he prepares a master switch list that will be used in classifying the cars. At the head of the list goes the engine number, the conductor's name, the train number, receiving-yard track assignment, time of arrival and where the train arrived from. Each car in the train is listed by initial and number, weight (or notation that the car is to be weighed), and the classification track into which it will go.

In selecting the proper classification track the clerk







5.

PUSH-BUTTON ROUTING —By pressing four of the numbered buttons on the panel in front of him the hump conductor automatically alines all switches to send four cuts of cars onto four separate tracks

has the aid of something entirely new in yard operation on the Southern - a detailed card index showing the location of every station on the system, whether or not there are connections at that point with other railroads and what track in the classification yard should receive cars destined for that station. The index also contains a list of consignees in the Knoxville area, showing which of the seven industrial switch engines serves each. This guide to the proper classification of cars is particularly valuable because the increased number of classifications now made includes some entirely new to the clerks.

Special notations are made on the switch list opposite cars containing livestock or explosives. In the case of a livestock car the note tells the time of loading and of the last rest period for the animals. (In the case of incoming trains from the West the work up to this point is done by the clerk's office at the west end and the switch list and waybills are sent up to the hump yard office through the pneumatic tube system.)

From the master switch list the clerk runs off on a duplicating machine enough copies to furnish one to the chief clerk for the files, one to the train clerk in the scale room (he gets the waybills along with his copy of the switch list), one to the hump conductor, one to the terminal trainmaster, one to the car-retarder operator, one to the record clerk (for the record of inbound cars), one to the car marker, and one to each of the

inspectors in the two pits near the hump.

As the train pulls completely into the receiving yard it is "stretched out" by braking against the pull of the locomotive, drawing the couplings between cars to their full extension. This makes it easier for the car inspector to examine the couplings and the air-brake pistons. He also opens the lids on the journal boxes to inspect the packing inside. Another yard man follows the car inspector to release the air pressure on each car brake to get the train ready to be moved up to the hump. Meanwhile, the train's diesel locomotive is cut off and run down a thorofare track through the underpass to the locomotive terminal to be serviced.

#### **Humping Starts**

After getting word from the terminal trainmaster which train in the receiving yard is slated to go up to the hump next, the hump conductor notifies the engineman and crew of the hump switch engine by radio. After the switcher has been coupled to the train and the four hand brakes at the west end (which were set by the train crew) have been released, the engineman tells the hump conductor by radio that he's "ready to shove." The conductor gives him the "go ahead," and a green light appears on the signal (Picture 2) at the west face of the yard tower.

As the forward or east end of the train reaches a point 50 to 75 ft. from the yard tower, the signal light changes to yellow, warning the conductor to bring the train speed to the 2 m.p.h. required at the hump. In their progress the cars next roll across the draggingequipment detector. If a hopper door, for example, is hanging down where it might foul a retarder or switch, it strikes the detector which sounds a warning bell and flashes the hump engineer a "red board" on the tower signal to warn him that a car has to be fixed before it can go over the hump.

A car inspector leaves one of the glassed-in pits at each side of the track momentarily to close the hopper door, gives the hump conductor an "O.K." on the car, and the engineer gets the "yellow board" again. Back in his inspection pit, the car inspector's eyes are about on a level with the top of the rail (Picture 3). From this vantage point he examines the wheels and running gear as the cars ease past him. At night, lights at the sides and in the center of the track illuminate the wheels and underframes of the cars for the inspectors.

If the inspector finds something wrong with a car he uses the yard intercommunicating system to give the



6.

OVER THE HUMP—"Pin puller" uncouples a refrigerator car in front of the hump conductor's office as hump engine pushes train from the receiving yard

hump conductor a warning to send the car into the badorder track, and to tell the repair-yard foreman what he found to be the trouble with the car.

Just beyond the inspection pits a car oiler (Picture 4) on each side of the track squirts hot oil with a pressure gun into the journal boxes left open by the receiving-yard car inspectors. With the barrel of the gun he closes the lids of the journal boxes next to the steps — a safety move for the protection of employees who may climb those steps while the car is in the classification yard.

#### "Code" Routing

Consulting his switch list, the hump conductor (Picture 5) punches out on a control panel at his desk the various "codes" to send the passing cars into the proper classification tracks. Each number is called a "code" because it involves more than one switch. When the conductor presses the button numbered "16," for example, five switches are automatically lined up to send the car into Track 16. As many as four codes can be punched into the machine in rapid succession; then as soon as the car or cut of cars destined for the first track clears the last switch involved in the code, that code goes off the machine and another one can be punched into this "mechanical brain" of the classification yard.

The codes in the machine are shown on a vertical arrangement of four lighted panels at one side of the control board. As a code goes off the machine, the other three numbers move up one panel. Thus the conductor always knows how many codes are left in the machine's electronic "innards" and how soon he needs to punch in others.

At the crest of the hump works a switchman, generally called a "pin puller," because he uncouples the cars just before they go over the hump (Picture 6). Some pin pullers use a switch list, others rely on the hump conductor's directions over the loudspeaker. A clerk with a switch list marks the cars as they come up to the hump.



7.

MASTER RETARDER—Loaded cars are slowed down right after they have left the scale, but single empties roll free

After they go over the crest of the hump all cars pass the scale retarder but none is slowed there unless the car is to be weighed, and then only if it is more than 45 ft. long. (For accurate weighing a car must remain completely on the track scale four seconds. A long car of course will roll off the end of the scale sooner than a short one.) Gaining speed on the downhill side of the hump, the cars pass through the master retarder (Picture 7) where loaded cars and cuts of cars are slowed down. Single empties are allowed to roll free through the master retarder. In the six group retarders on the tracks fanning out from the hump track the retarder operator has another opportunity to regulate the speed of the cars. From his tower he can see the car from the time it leaves the hump, but he doesn't have to rely on his eye alone to judge the speed of the car as it approaches the group retarder. Three radar Speed Meters, on the desk before him, show the speed of the cars



8.

"BLOCKING" OUTBOUND
TRAINS—Two switch engines work simultaneously at the east ends of the classification and departure yards. The one at the left is pushing a string of cars into its proper "block," while the one on the right pulls another from a classification track

as they approach the group retarders, letting him know how much their speed has to be retarded.

In addition to controls for the master and group retarders the retarder operator's control board contains emergency switch controls that enable him to change the coded switch setting if there has been some error. If a car gets onto the wrong track or if it fails to roll far enough to clear an adjoining track, a trimmer engine comes in to straighten things out. Cars containing livestock or explosives go into two tracks at the side of the hump, to be switched into the proper train later in the forwarding yard.

A yardmaster in a tower at the east end of the classification yard supervises the making up of trains in the forwarding yard. When ready to have his switch engines pull strings of cars from the classification yard, he lets his yard crews know the order in which to pull the various tracks, to make up the train in proper order from caboose to engine. He calls the train clerk in the yard office (by telephone or "intercom") to have him pull the freight bills for those tracks from the circular file, set them up in train order and calculate the tonnage from the waybill weights. This tonnage figure, along with word from the terminal trainmaster concerning the diesel power available at the moment, lets the vardmaster know whether he can make up a train containing all these cars. (A four-unit diesel, for instance, is rated for 6,500 tons out of John Sevier.) The number of classification tracks that have to be pulled to make up a train depends on the destination. As an example, eight tracks have to be pulled to make up a train for Asheville.

Before pulling a classification track, the yardmaster notifies the hump conductor to block that track—a simple matter of slipping a metal yoke behind the numbered button on his control board so that it is impossible to press it down. From the hump conductor the word goes to the retarder operator, who blocks his emergency switch in much the same way. With that done it is physically impossible to switch a car into the track being

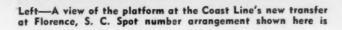
pulled. This is another of the safety features built into the yard.

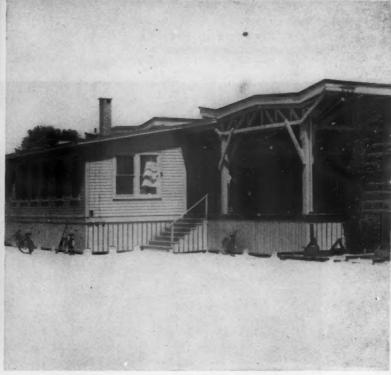
After switchmen have shoved aside the skates (metal stops placed on the tracks to keep cars from rolling out of the east end of the classification yard), the switch engine couples to the nearest car in the string and moves it out of the classification yard and into the forwarding-yard track (Picture 8) selected by the yard-master. Cut by cut the switch engine builds up the train. The last cars to go in are the refrigerators which are pulled from Track 48, next to the new icing platform with its chain conveyor and ice-storage shed.

All the time he is signaling, and especially as the train nears completion, the yard conductor keeps an eye on the yellow light beside the track. When it blinks out, it warns that the cars at the other end of the track have crossed a track circuit near the opposite end of the forwarding yard and there's just enough room left on the track for four more cars and a four-unit diesel. The train is, for all practical purposes, complete. These signal lights make it unnecessary for any man to ride a car into the forwarding yard, since its saucer-like depression makes the setting of hand brakes superfluous.

Now for the engine—and the final check-up before the train leaves John Sevier. A call from the terminal trainmaster to the engine crew at the shop sends a locomotive on its way through the underpass, along the thorofare track (which is also an emergency main line that runs the full length of the yard), to couple up to the head end of the train. Car inspectors blue flag the track, warning that the cars are not to be moved, and then range the length of the train taking a final critical look at couplings, draft gear, running gear and journal boxes. While this is being done the conductor picks up his waybills at the yard office where they have already been put into train order and photographed in a Recordak for record purposes. When the car inspectors' warning flag goes down, the train crew climbs aboard and the train moves out onto the main line.







standard at A.C.L. transfers. Right—The office at Florence Transfer. There is no headhouse

## Modernizing Transfers Pays Off For Atlantic Coast Line Customers

Specially written for Railway Age
By M. M. DESCHAMPS
Chief of Property Protection
Atlantic Coast Line

Beginning in June 1947, a successful program was inaugurated by the Atlantic Coast Line to bring about uniform and economical methods of handling less-carload freight and to explore further the possibilities of mechanized operation at the freight transfers and larger agencies. At the same time, the railroad's property protection department was given general supervision over the handling of less-carload freight at transfers and agencies. Under this program, with the cooperation of all departments, the operation at all transfers and a number of the larger agencies was mechanized and streamlined. Studies of practices tending to improve freighthouse and transfer operations were made by A.C.L. representatives at foreign line points as well as at our own "better" stations. Many of these improved methods were adopted at some of our stations and transfers, and have contributed largely to a more economical operation.

Particular attention was given to the Coast Line's three large freight transfers, located at Rocky Mount, N. C., Florence, S. C., and Waycross, Ga. Several steps were taken to effect greater speed and economy in the transfer of freight. The three transfers were placed on a seven-day week operation, by staggering the forces, which relieved congestion and helped to speed up the transfer

of freight. Cooperation with yard forces in the placement of cars was effected, and duplicate handling and lost motion in the checking of freight and office practices were eliminated. For instance, in order to cut clerical expense, we adopted continuous form of waybilling at some of the larger agencies, and discontinued the expensing of waybills on shipments of company material as well as the issuance of such forms as transfer exception reports.

The mechanized handling of less-carload freight at the three transfers was supplemented by the purchase and placing in service of 41 additional units of gas-powered platform trucks which carry both freight and the driver. These trucks have expedited the handling of freight with reduced labor force.

With the use of mechanized equipment and other more modern methods of handling l.c.l., and improvements in the physical layout of the three transfer facilities themselves, the cost of all wage increases since January 1, 1946, has been absorbed and the average cost of handling less-carload freight at these three freight transfers has been reduced from \$1.72 per ton in 1947 to \$1.55 per ton (9.9 per cent) for 1950. (These costs include the salaries of transfer foremen, platform and check clerks and laborers (but not of the agent and office force); depreciation on equipment, based on a 10-year service life; interest on investment, at 6 per cent; maintenance, fuel and lubricants.)

At Rocky Mount, the freight transfer has been moved from South Rocky Mount and consolidated with the Rocky Mount freight station. The construction of two







additional tracks and an extension to the freighthouse platform gives us now approximately 100 car spots. There are four tracks on one side of the platform, which is of wood construction, and two tracks on the other side. The average number of cars handled daily is 139, by an average daily force of 61 employees. Loaded cars are received from approximately 71 off-line and 19 online points, and cars are loaded out to approximately 58 points.

An entirely new freight transfer has been constructed at Florence, S. C., located some distance from the old transfer house. This new transfer consists of three loading and unloading platforms, each 615 feet in length and 20 ft. 10 in. in width, and a new modern office. The platforms are covered, with roofs designed to furnish the best all-weather protection to merchandise being transferred. The platforms are constructed to withstand handling of heavy shipments and to provide faster and safer handling of freight, and for the safety of employees. This new plant with its eight tracks will accommodate 112 cars. Cars are received from and loaded to a large number of off-line and on-line points. The employees at Florence are proud of their new plant and are doing everything possible to handle freight promptly and safely.

Top—Micro-Lever dollies have been fitted up so that one man can handle dock plates in safety and with relative ease

Center—Platform burden carriers handle a large percentage of the freight at the A.C.L.'s three transfers. This driver has loading ballot in left hand

Bottom—The Colson lift jack and semi-live skid also have proved useful in cutting the cost of handling l.c.l. Here a pick-up truck driver and platform laborer load up a skid which will be moved later to outbound cars

#### INVENTORY OF FREIGHT-HANDLING EQUIPMENT IN SERVICE AT ATLANTIC COAST LINE POINTS

Rocky Mount Transfer, N. C .- 10 Chore Boys Florence Transfer, S. C. —18 Chore Boys

—1 tractor, 155 trailers Richmond, Va.

Pinners Point, Va. -1 fork lift truck, 1 tractor,

155 trailers

Norfolk, Va. —1 tractor

Savannah River Wharf, Ga.-6 fork lift trucks, 4 tractors, 12 electric dock trucks

Waycross Transfer, Ga. -9 Chore Boys, 13 Kwick-Toters, 1 fork lift truck, 1 tractor, 100

Jacksonville, Fla. Toters, 100-ft. gravity conveyor,

15 trailers

Tampa, Fla. -4 Kwick-Toters, 200-ft. gravity

conveyor, 20 trailers

-3 Colson lift jacks, 40 semi-live Columbia, S. C.

skid platforms

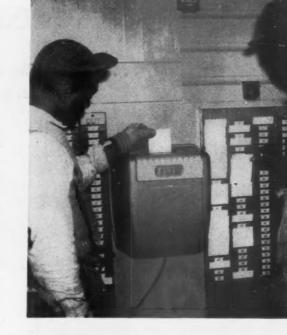
Sumter, S. C. -3 Colson lift jacks, 30 semi-live

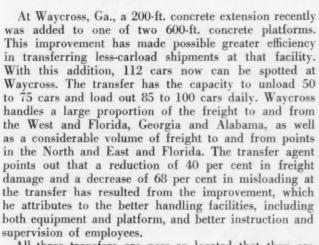
skid platforms

Charleston, S. C. -3 Colson lift jacks, 30 semi-live skid platforms

Orlando, Fla. -2 Colson lift jacks and 20 semi-

live skid platforms

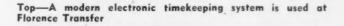




All three transfers are now so located that they are readily accessible to existing and proposed over-the-road

truck service.

With the modernization of the transfer facilities at these three principal points, and upon receipt of further mechanized freight handling equipment on order or authorized, the Coast Line feels that it will be able to absorb increased labor costs and further reduce the cost of handling less-carload freight at its freight transfers, and at the same time give expedited service to patrons.



Center—Florence Transfer Foreman Nix issues loading instructions over a loudspeaker system. This saves much time in walking up and down the long platform

Bottom—J. H. Hughes, agent at Florence Transfer, has an intercommunication system over which he can talk with Foreman Nix and persons working on the platform. Here he gives dictation to his secretary, Mrs. Anna Ergle





## National Distillers Means Business

About Loss & Damager . . . Firm was host in two-day review and outlook meeting for everybody concerned in transportation

t isn't every day that a large manufacturer invites some 40 railroad men, retailers, suppliers—and competitors—to meet with 25 representatives of its plants from all parts of the country to spend two full days putting heads together on a common problem. But that is what the National Distillers Products Corporation did recently, for the seventh year, to give evidence that it is standing behind its general traffic manager, Charles W. Braden, in his all-year, every year campaign to reduce loss and damage. The host provided not only the program, but also the lunches and an outstanding dinner.

The setting of the 1951 meeting was the Cincinnati (Carthage) distillery and bottling plant of National Distillers. Included in the program was the loading of a test car of liquor to demonstrate the simplicity and efficiency of the unitizing carloads of commodities in fiberboard containers, with the use of retaining paper as binder. Illustrated in Fig. 1, this loading plan was devised in 1947 to meet particularly the problem of crushing at the end walls of the car (where 60 to 80 per cent of the breakage to alcoholic liquors formerly occurred). With this practice—where the load is "paper restricted"—the advantages of unitizing by gluing the cases are gained, and the disadvantages avoided.

#### **Unitizing Pays Off**

Another session was devoted to a panel discussion, by railroad claims prevention officers and container manufacturers, of a detailed report on National Distillers' record on loss and damage for the past two years. By means of a standardized, easily understood, destination report postcard form supplied to each consignee for each shipment (Fig. 2) the company has succeeded in stepping up the rate of reporting by receivers to 65 per cent of total shipments—a figure which railroad and traffic representatives at the meeting termed extraordinarily high.

The information so received has enabled National Distillers to analyze minutely the behavior of its shipments through to destination. It found, for example, that breakage reported by destinations in certain states is very much higher than that in others, despite the fact that the shipments were packed by the same plants in the same manner. This would indicate either that railroads in certain sections of the country are doing a poorer job than in others or that receivers in the "bad" states are rough handling the goods themselves during unloading.

As an experiment, the unitizing of bottled liquor in containers was suspended by shipping plants in the Louisville division of the company in April 1950. Whereas average breakage per car for all plants, except Louisville, was seven bottles in 1950, that in cars shipped by the Louisville division was 12 bottles. During the first 2½ months of 1951 average breakage per car from all plants except Louisville was five bottles, while the

Louisville division record was 9.3 bottles. The report concludes that if unitized loading had not been suspended for the Louisville division loads, the company's overall record on breakage would have been substantially better in 1950 than it was in 1949. The handling record overall was an average of 8.2 bottles broken per car in 1950 compared with six bottles in 1949. (Under the present heavy loading standard, National Distillers loads about 16,000 bottles in a car.)

"The most important single development" in National Distillers' prevention program since the close of World War II, according to the report, was an improvement in the specifications of its shipping cases for quart and fifth sizes, which came into use starting February 1949. A still further step-up in specifications standards was made in January 1950, and again in July 1950. In connection with stop-off cars the report notes that the company's experience in "layer loading" indicated that this method is definitely superior to bulk-heading in protecting the lading—layer loading being the placement of merchandise for final destination along the floor throughout the car, on top of which the merchandise for stopoff is loaded.

Since its previous loss and damage prevention meeting, National Distillers loaded three test cars according to the "prone" method for maximum long haul overland from the East to California. As a result it concluded that further experiment with this method of loading should be suspended "pending more assurance of merit," but that prone loading may receive further experimentation in the future. The loss incurred on these three experimental cars was charged off by the company to "prevention research."

#### Worse to Come?

In presenting his report to the meeting, Mr. Braden pointed out that shippers and carriers face emergency conditions in the days ahead. Shortages of adequate containers and retaining paper are in the offing. Shippers may have to resort to some of the improvisations of World War II. Higher prices and the proposed high tax on liquors alone will make even more difficult the battle to reduce claims in dollar amount. Proposed new federal taxes on liquor, for example, will mean 60 cents a fifth more on claims paid on every broken bottle.

The second day of the meeting was devoted to a panel discussion on the role of shippers and carriers, respectively, in the prevention program. A spokesman from each geographical division of National Distillers spoke briefly on experiments, findings and practices in the plants under his jurisdiction. Representatives of the liquor control commissions of two so-called monopoly states (where a government agency is the sole retailer) explained the stake which the distributor of liquor has in good shipping practices and criticized the notion that



Photographed as they arrived at the Carthage plant were 57 railroaders and suppliers, customers, competitors, and plant personnel of National Distillers Products Corporation.

Some 75 attended the two-day loss and damage meeting. Charles W. Braden, general traffic manager of National Distillers, is at front and center (wearing railroaders' cap)

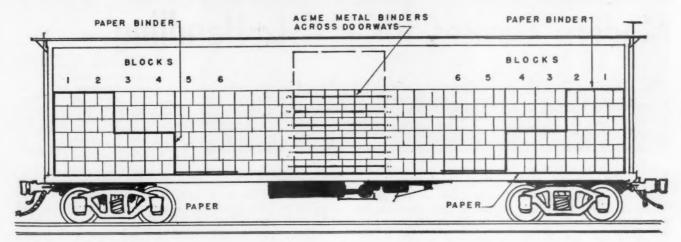


Fig. 1

Fig. 1.—National Distillers utilizes liquor shipments in fiberboard containers with retainer paper as a binder. Crushing at the end walls of the car—where 60 to 80 per cent of breakage of bottles formerly occurred—is greatly reduced

Fig. 2.—THE EXTRAORDINARY RATE OF 65 PER CENT RETURNS is obtained from consignees by National Distillers on damage reports. The receiver's job is made easy by the transmission of a double postal card—one stamped side addressed to the consignee and the other addressed back to National Distillers. The reverse side of the former (the lower of the faces reproduced here) contains a plea for cooperation from the receiver. The reverse side of the returnaddress card contains the "standard destination report"

"receivers don't have to bother because the railroads pay the claims."

E. G. Overmire, assistant to manager, property protection and freight claims department, New York Central, summarized various efforts made by the carriers in employee education. The traffic managers of several competing liquor manufacturers also addressed the meeting. The business session was concluded with an address, in connection with color slides, by R. M. Lamport, assistant vice-president, General American-Evans Company.



Fig. 2



Clark fork lift truck (right) and Buda "Chore Boy" (in the car door) used in handling merchandise freight at the Missouri Pacific Little Rock station. This illustration also shows one of the 36-ft. box cars equipped and painted for "Eagle Merchandise Service"

## How Little Rock Station Employs Modern Devices for L. C. L. Handling

The Missouri Pacific has adapted its existing freighthouse to efficient use of latest practices and devices

The Little Rock freight station is located at an important crossroads on the Missouri Pacific lines—at the point where the main line from St. Louis and Memphis to Texas crosses the main line from Colorado, Omaha and Kansas City to New Orleans and points in Louisiana and the southeast. The introdution of new merchandise cars, "Speedboxes," "Portakold" refrigerated c on t a in ers, mechanized handling devices, a new intercommunication system, coordinated rail-truck service, and a railroad owned and operated pick-up and delivery service at Little Rock has made possible substantial service improvements and reductions in handling costs.

The freighthouse structure is not new, but does have an efficient layout, and by various improvements installed from time to time, has been kept well abreast of the times. It is actually the sixth largest freight station on Missouri Pacific lines in terms of tonnage, and is currently handling an average of 5,213 tons of merchandise freight a month.

Located almost on the banks of the Arkansas river, the building is long, with an island platform, and with a main warehouse incorporated in the structure. An additional building, for handling perishables, is separated from the main station by a busy industrial street which feeds directly into the center of the city's wholesale and jobbing area along Markham street. The house, with four parallel tracks, has a capacity of 65 cars and, under normal operating conditions, is pulled during the late afternoon and is set in the early evening.

Not quite a year ago there was a step-up in the mechanization of the Little Rock freight station when 25 Buda "Chore Boys" were assigned to service there. They were

in addition to the six Clark fork-lift tractors which had been in use for some time. Some palletizing is carried out at the Little Rock station and these pallets are handled by fork lifts, which also handle the new merchandise "Speedboxes" in and out of cars and on and off trucks. Since the "Chore Boys" were placed in service the use of hand trucks has been given up almost entirely, their use being confined mostly to the loading and unloading of motor trucks at the warehouse doors or in other places where the larger units cannot be used. The "Chore Boys" are in use almost steadily during working hours and cover the long reaches of the main warehouse and the island platform in fast time.

Because of the physical layout of the station and adjacent warehouse and perishable building, communication between the local freight office on the second floor and various sections of the warehouse as well as certain parts of the platform was, for many years, a long, drawn out affair which decreased the station's operating efficiency considerably.

Within the last few years, however, an intercommunicating system has been installed, with loudspeakers strategically placed on the platforms, in the warehouse, and in various sections of the upstairs office. This has increased the operating efficiency materially. For example, the claim clerk in the upstairs office is in constant reach of the platform foreman, the pick-up and delivery supervisor and others from whom he might require information.

There is also a connection between the agent's office and the platform and between the billing department, where expense bills are made, and the cashier's

This Missouri Pacific truck which has just completed a delivery at a furniture warehouse, is a part of the railroad owned and operated fleet performing pick-up and delivery ser-vice in Little Rock. The Missouri Pacific has found this company owned and operated service to be superior to that formerly obtained from contractors





Three of the "Speed-boxes" used by the Mis-souri Pacific as a part of its "Eagle Merchandise Service." These containers "Speed-Service." These containers are moved at an all-commodity rate, with the shipper paying only for the gross weight of his merchandise—not including the weight of the "Speedbox"

department, on the one hand and the platform forces on the other. The system also permits ready communication between various stations on the platform, thereby eliminating the time consumed in transmitting orders or instructions from one part of the warehouse to another.

#### "Speedboxes" and "Portakolds"

As an addition to their merchandise freight facilities, the Missouri Pacific Lines started more than a year ago to use metal containers called "Speedboxes" (January 8 Railway Age, page 30). These containers will hold up to 1,200 lb. of freight; they are mounted on casters for convenience in handling, and they may be handled by fork-lift tractors as well. These "Speedboxes" are loaded in the consignor's place of business and sealed by him, and the contents remain untouched until the box is unloaded at the consignee's wareroom at destination.

Use of this new type of freight container has reduced materially the cost of hand-intermediate handling across platforms. On the part of shippers and receivers it has been welcomed because loss of and damage to freight so shipped has been reduced virtually to the vanishing point. Another advantage from their viewpoint is that use of the "Speedbox" does away with the necessity of wrapping and packaging each separate item of freight.

These "Speedboxes" move on an all-commodity rate with the customer paying only for the weight of the contents. At present these boxes are in service between St. Louis and points in Missouri and Arkansas south of St.

Louis; and between Little Rock and points in Arkansas. The service was recently extended between Kansas City and points in western Missouri, Kansas and Nebraska. Shippers of variety store merchandise, especially, in the Little Rock area have made extensive use of "Speedboxes" since their introduction.

For some years the Missouri Pacific has been handling certain classes of l.c.l. perishable products in "Portakolds"—a portable refrigerated container. Freight placed in "Portakolds" is kept under refrigeration the same way as it would be in an iced refrigerator car, and can be transported safely either in a way car or on the local freight train, or by highway truck. At Little Rock, "Portakolds" find their greatest use in handling packing house products. At least one regularly scheduled meat peddler car breaks bulk each week, and frequently there is additional packing house tonnage, all of which is distributed from the Little Rock station.

Traffic moving across the Little Rock platform is about equally divided between transfer freight and freight destined to or from the city. As the largest city in Arkansas, Little Rock supports an extensive jobbing trade and much of this business moves across the M.P. platform. Freight originating with Little Rock jobbers or intended for delivery to them is picked up or delivered by railroad-owned and operated delivery trucks. Little Rock was one of three or four medium-size cities in which Missouri Pacific set up its own pick-up and delivery service (through its subsidiary Missouri Pacific Transportation Company) several years ago. The ex-

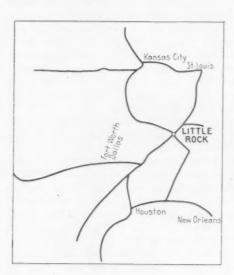


Five of the Buda "Chore Boys" used in the Missouri Pacific's Little Rock local freighthouse. The young lady is one of two feminine check clerks employed at this station

periment has more than paid for itself, in the view of company officers.

Drivers of the trucks are classed as "delivery clerks" and, with their vehicles, are on the streets throughout the day, being dispatched from location to location by a pick-up and delivery supervisor who contacts the driver after each delivery or pick-up has been completed. Inauguration of this type of pick-up and delivery service has had a material effect in reducing damage claims to freight in transit from the freight station to or from the consignee's or consignor's warehouse. It has been discovered that the vehicle clerks, being directly employed by the Missouri Pacific, seem to take a greater interest in their work than do those employed by a contract hauler.

There is some interchange of merchandise freight at Little Rock between the M.P. and the Rock Island, which is the only other road operating into the city. If the volume justifies a trap car is loaded, but most of the transfer is by dray.



Little Rock is an important crossroads on the Missouri Pacific

Another important advance made by M.P. is the development of the "Eagle Merchandise Service" combining the "Speedbox" with the advantages of specially equipped cars for handling merchandise freight. These cars, painted in the colors of the railroad's "Eagle" passenger trains, are somewhat smaller than the usual box car and, therefore, are more adaptable to the handling of merchandise freight in an economical manner and without wasted space. They are equipped with interior fastening devices to aid in the safer and more rapid stowing of freight. So far, these "Eagle Merchandise Cars" are permitted to operate only between stations on the Missouri Pacific lines and on the Texas & Pacific. Since they have been placed in operation, daily spotting of the house at Little Rock includes a number of these cars, some coming in for unloading and some moving in empty for loading at the house.

#### Rapid Delivery by Truck

By far the heaviest volume of merchandise freight moving across the Little Rock platform is destined for over-the-road trucks operated to points as far as 100 miles distant in all directions where M.P. coordinated rail and truck service is provided. Cars loaded on Little Rock break bulk there and the freight is distributed to waiting trucks, most of which depart in the early morning hours. This affords delivery much more rapidly—and at less expense to the railroad—than the old delivery by local freight.

Several truck runs fan out of Little Rock daily. For example, trucks operated by a contract carrier for the account of the Missouri Pacific Lines pull out from the Little Rock platform early each morning for Newport on the north; eastward along the Memphis division almost to the Mississippi river; southwest as far as Hope, Ark., southeastward almost to McGehee, Ark., and west along the Central division almost to Fort Smith.

On the return trips these trucks make stops at the stations they serve to pick up freight destined to breakbulk stations served through the Little Rock warehouse.

# CORROSION OF CARS COSTS \$191 MILLION A YEAR— How Can It Be Reduced?

[Corrosion damage accounts for approximately 30 per cent of the cost of maintaining railway rolling stock and proper design can play a large part in reducing this expense. How this may be accomplished was outlined in a talk by F. K. Mitchell, manager, equipment, of the New York Central system, before the Car Department Association of St. Louis. An abstract of his discussion follows.—Editor.]

We have been confronted with the problem of corrosion damage as long as any of us have had anything to do with the design and maintenance of equipment. Too often the problem has been approached in a lackadaisical manner and probably without full recognition of its extreme importance.

To obtain information which might serve to crystalize the extreme need for a better approach, I have been conducting research to determine what portion of our maintenance cost on passenger and freight cars is attributable to corrosion damage and what is the cost of repairs due to corrosion damage.

Our studies so far indicate that the ratio of corrosion damage repair to total repair costs on selected types of rolling stock is approximately as follows:

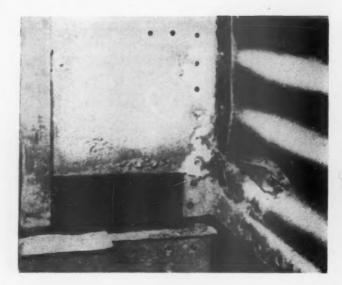
ock is approximately	6612	TOHOUS.	
Type, Cars		Percen	tage
Hopper		64	
Gondola		58	
Box		19	
Flat		. 8	
Coaches		25	
Baggage		40	
Passenger-and-baggage		35	
Mail-and-baggage		33	

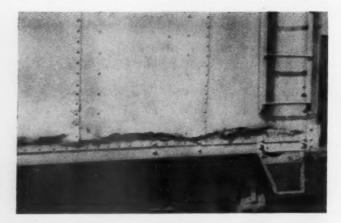
Based on these figures the overall corrosion repair cost on freight cars was approximately 33.5 per cent and on passenger-equipment cars 28.9 per cent. Association of American Railroads records for 1949 indicate that the railroads of the United States spent \$428,306,950 for freight car repairs and \$163,773,669 for passenger car repairs. Applying these percentages to these national costs, it appears that corrosion damage repairs totaled \$143,482,828 for freight cars and \$47,330,590 for passenger-equipment cars in 1949. Certainly these figures indicate that there is no wider opportunity for reduction in overall maintenance costs.

#### What Causes Corrosion?

To approach this problem with some semblance of logic, we should have a clear understanding of what causes corrosion damage. The types of corrosion damage are varied and in each case the approach to its correction may have to be different. Perhaps the outstanding causes for the various types of corrosion damage on rolling stock are rust, acid (chemical) and electrolytic reactions.

Corrosion damage from what we ordinarily know as rust is probably the form with which we are most familiar. Rust is the result of oxidation of iron and steel in the presence of moisture. Its action is greatest and the damage is most accelerated when moisture is present in





Left—Corroded section of steel box car sheet at corner underneath corrugated steel end. Above—Corroded section of steel box car side sheet at floor line

confined areas and the metal is unprotected by a satisfactory coating.

Rust damage is seldom entirely due to the combination of moisture and unprotected metal surfaces. Proof can readily be found in the fact that in certain locations rust corrosion is far more active than in others.

Rust deterioration of the side sheets of a gondola car is far more rapid in the lower half and particularly in the lower ten or twelve inches. This is true whether the inside surface of the side sheet has been treated to prevent corrosion or not. The same is true on a box car. In time rust corrosion results in the material wasting entirely away at and slightly above the floor line. Now these corrosive or rusting actions would have proceeded uniformly over the whole surface of the side sheets had not other factors than moisture accelerated the action in the indicated location. One of the principal factors which accelerates corrosion at this particular point in these cars undoubtedly is acid. Acid along with moisture reacts not only with the steel side sheet, but with the lading in this location, and the resultant deterioration is accelerated by both actions at the same point.

#### **Concentration of Stresses**

There is another corrosion accelerator that speeds up the deterioration in the locations just referred to, which has in the past received little attention but which is just as important and perhaps more so than the acid condition. This is the concentration of stresses at these locations. A relatively weak superstructure of a box car or inadequate bracing of side sheets in a gondola car unfortunately concentrates stresses in the area where corrosion is most active. Concentration of stresses is responsible for the gradual deterioration of the metal even though corrosion does not occur. In overstressed areas, these concentrated stresses result in microscopic fractures or molecular slip bands into which the elements of corrosion may enter and begin to work. The results are tragic.

What has been said with respect to box and gondola cars is equally true on hopper cars. Experience has shown that the deterioration on this type of car is greatest on the hoppers and on the side sheets just above where these connect to the slope sheets. The damage to the hopper, depending upon the type of construction of the hopper itself, is normally the result of rust and acid

corrosion. With the built-up hopper, however, which has a reinforcing strip across the mouth, it is found quite often that the corrosion damage is accelerated along the upper edge of the strip. At this location stress concentration has accelerated the damage.

#### Passenger Car Damage

On the passenger car, the greatest corrosion damage is usually concealed. It is invariably found to be the greatest where it is possible for moisture to accumulate between two sheets or shapes.

Some types of corrosion damage on passenger cars are due strictly to acid reaction. Outstanding is damage to battery boxes, in which case the acid attacking the metal is more concentrated than the acids accelerating corrosion damage in other locations. The more diluted acids of course require much greater time to show a serious effect.

Experience has shown that it is possible to encounter rapid and expensive corrosion damage through the wrong combination of materials in passenger car construction. One of the most striking examples of this type of corrosion has occurred where aluminum bulkheads have been entirely corroded away at the floor line by reaction of a floor cement containing ingredients which actively attack the aluminum. In some instances this reaction has proceeded until the aluminum salt produced by the reaction raised the floor so doors in the bulkheads could no longer be operated.

#### Two Further Types

Up to this point selected typical kinds of corrosion have been discussed; instances where rust alone is the result of oxidation where moisture is responsible; where the corrosion is a combination of rust and chemical reaction; where it is a combination of rust, chemical and stress concentration; where it is due to chemical reaction alone; and where it is due to chemical reaction set up by abutting materials. There are two further types of corrosion damage which cannot be overlooked. First is rot of wood parts. Experience has shown that this type of corrosion is accelerated where wood fits against steel and there has been a failure properly to seal water out of the joint. The last type of corrosion, which is not generally understood and which is not too common, is the electrolytic

action which may result from improper selection of materials which go into the construction of a car.

No study of the entire problem can overlook any of these types of corrosion, nor the possibility that there may be other types with which we are not so familiar.

#### Reducing Damage by Proper Design

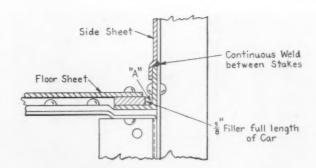
The simplest part of the problem to understand is what we refer to normally as rot and rust. The easiest way to dispose of rot is to eliminate wood from rolling stock construction. This has been accomplished to a large extent already. The future will probably see wood entirely eliminated from all types of rolling stock. Where it is still necessary to use wood, however, careful consideration should be given to the advisability of proper impregnation of the wood with materials to prevent absorption of moisture. Furthermore, where it is necessary to use a combination of steel and wood construction, all joints between these two types of materials should be carefully insulated against moisture by approved cements or other chemicals designed for the purpose. Selection of wood, where it is necessary to use it, should not forego the adoption of a type of wood less susceptible to rot, even though more expensive.

The elimination of corrosion damage by simple rust can and must be approached from two principal points of view. First is the selection of metals which are least susceptible to rust corrosion. Here, however, the first cost cannot always be overlooked. If it is necessary to use metals which are susceptible to rust corrosion under normal conditions every effort should be made to protect them by the use of sealing compounds between the sheets at the joints and by paints which will seal the exposed portions of the metal against rust for the normal time between shopping periods for the equipment.

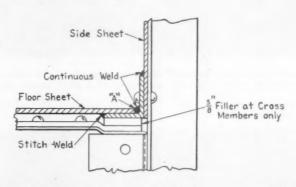
No niggardliness should enter into the selection of the material and paint to be used. The cheapest protection in the long run is the primer and paint which will retain its protective value over the longest period of time. Because of the highly corrosive nature of some of the lading handled in freight cars, even the best primers and paints cannot be expected properly to protect exposed surfaces of metal parts of a car throughout its normal shopping period, so it is essential on any railroad that a program for repainting cars at satisfactory intervals between general repairs be set up if the life of the car is to be prolonged.

The next step in the prevention of normal rust corrosion damage, and indeed in the elimination of acid corrosion damage resulting from moisture and lading reaction, is the sealing of all joints in the areas where corrosion is known to be most active, using welding or other methods. This is imperative if there are lap joints where corrosion can take place between the sheets. If lap joints must be used, the elimination of corrosion demands that the surfaces between these metal parts be, first, properly protected by acceptable cement, and then the edges sealed by welding.

In the construction of a box car the method of sealing the side sheets at the floor line against the possibility that grain or other lading might accelerate the damage is important. Where wooden beveled grain strips are used, as is common on many roads, it is impossible to keep the grain strips sufficiently tight against the side sheets and the floor to prevent lading from sifting into the crevices. Even if wood of reasonably good quality is used, normal shrinkage and distortion will create openings that are an invitation to the gremlins of corrosion to attack at that point. If no grain strip is used, there is still the likelihood that an opening will exist between the



How floor and side sheets were applied. Note Point A vulnerable to active corrosion



How the floor and side sheet should have been applied to minimize corrosion at point A

floor board and side sheet in which lading will accumulate and start corrosive action. Some experiments have been conducted using a plastic strip troweled into position and contoured, both to seal the joint where the damage normally occurs and to direct the lading out on the floor where it can be disposed of. In this connection, it is my opinion that we have only just begun to touch the outer fringes of the possibilities in the use of plastics in the construction of rolling stock. The use of plastics in the elimination of square corners at the floor of passenger cars will not only minimize the concentration of corrosion damage, but will make for much more sanitary conditions.

The designing of rolling stock to eliminate a concentration of stresses at points where corrosion damage is known to be the greatest is a study which should be actively progressed. This may mean the use of heavier sheets where stresses might otherwise be concentrated with damaging results. In other cases, it may mean a strengthening of the supporting elements of the car or car parts, even though this might have a tendency to add somewhat to the weight of the car. Again, it may mean a radical change in ideas as to the type of material to be used at these locations. For instance, it is a definite fact that the one-piece hopper is less susceptible to corrosion than the built-up hopper. An equally definite fact is that the cast steel hopper is less susceptible to corrosion than the other two types.

#### A Warning to Designers

The mere fact that a particular metal is less susceptible to corrosion damage than others and may have some better physical properties must not entirely govern the designer's decision. Although it may appear possible to substitute thinner sheets or shapes, he must not overlook the fact that the use of these materials in thinner sections



Corrosion due to rust, acid and fatigue stress at the hopper reinforcing strip on a built-up hopper of a steel hopper car



Effect of rust, acid and fatigue stress at the slope sheet and side sheet connection of a steel hopper can

may not be the answer for the reason that the lighter construction, through lack of rigidity, may lead to stress concentrations that will produce damage equal to what would be otherwise experienced. Furthermore, the designer must keep in mind three facts. First, that the composition of the metals used, usually influences corrosion much less than external conditions. Second, that the difference between the corrosion resistance of various metals usually depends on the ability of each to form and maintain surface films of a protective nature, in other words, their relative passivity. Passivity in metals is usually produced either by the action of strong oxidizing solutions, such as concentrated nitric acid of chromates, or by making the metals the anode in an electrolyte. Finally, the so-called corrosion resistant or passive metals quite frequently will revert to the normal or active state if removed from the passivifying media, especially if

service requirements subject them to abrasion, heat or contact with chlorides.

In the design of passenger ears, it is unfortunate that in recent years certain external appearances have been the deciding factor rather than the serviceability of the construction. One outstanding example is the trend toward the fluted side sheet, either of stainless steel or aluminum. No satisfactory scheme has yet been devised to insure that moisture or corrosive elements will be completely excluded from the area between the fluting

and the side sheet of the car.

The trend in design of window openings and the windows themselves is encouraging. In the past one of the greatest sources of corrosion has been failure properly to seal the window opening. Air conditioning has made the fixed window possible. Even the first design of fixed window was not consummated with the idea of eliminating the possibility of moisture getting inside the side sheets and between the various parts of the body. The introduction of molded rubber and the latest type of glass now make it possible to produce a moisture-proof window opening.

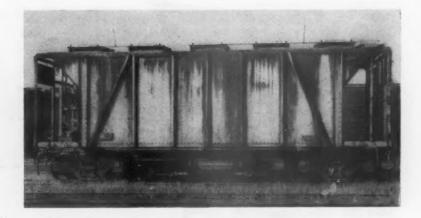
There seems to be no longer any necessity for a window frame. The window opening can be formed from the side sheet and the glass set in a molded rubber insert which will prevent water from entering not only around the side sheets, but also around the glass. Available materials for insulation which will prevent the condensation of moisture within the car walls and roof construction should materially eliminate corrosion at these locations. Tile or plastic floors which seal the moisture from the floor subassembly should be a part of any passenger car construction detail. Battery boxes, which formerly deteriorated in a surprisingly short time, can by proper interior coating and with grating floors to prevent the accumulation of acid-producing residue, be made to last the life of the car.

The selection of steam pipe insulation which will not hold condensation in contact with the steam pipe will materially lengthen the life of the pipe itself. Due consideration is essential to the location of drains and refuse disposal traps to prevent the deposits making these drains and traps vulnerable.

#### Other Types of Corrosion

Features of maintenance that enter into the corrosion problem begin at the rail line and end at the peak of the roof of many cars. Corrosion of journal and bearing parts may begin to be detrimental as soon as the parts are machined. It is essential that they be properly and completely protected at once. Friction-bearing corrosion, although not evident to any great extent, is responsible for many hot bearings. The selection and proper use of protective materials before the wheels are applied should not be overlooked. In the case of stored equipment, most important in times of slack business, both roller and friction journal-bearing parts should be protected by seeing that lubrication is proper and that the cars are moved occasionally to prevent acceleration of corrosion damage which might otherwise take place.

Brake rigging and spring rigging may not show evidence of corrosion damage to the casual observer, but there is no question that lack of proper lubrication and the presence of corrosion causes abnormal wear of pins and bushings. Truck center plates if not properly lubricated are subjected to abnormal wear because of corrosion. Inability of the car to conform to track curvature is just one of the results, sometimes a serious one, from this type of corrosion. Battery boxes, to say nothing of the batteries themselves, will be less susceptible to



Lading corrosion damage to paint on the exterior of a covered hopper car, the result of approximately two and one-half years' service

corrosion and parts deterioration from that source if the box is flushed out at satisfactory intervals.

On some types of cars, corrosion through improper maintenance will result in serious damage to underframes, center sills, cross bearers, etc. One example of this would be failure of the maintaining shop to properly seal the center sill hoods on a hopper car so that the lading, when an opening is left, will not sift down and build up on top of center sill. Another typical example of improper maintenance, inviting corrosion damage, was observed recently where a lot of composite gondolas were receiving new sides and floors, steel being substituted for wood. As the job was done, an opening some 3/4 in. by 1 in, remained between the floor and the side sheets. It goes without saying that within a short time the supporting angles of the side sheets and the floor would be ruined. This is the type of thing that maintenance men must be ever on the alert to avoid, remembering that a small saving in the first cost may result in far greater eventual costs.

#### Care in Cleaning

One of the greatest vulnerabilities of maintenance practices to corrosion damage is found in the cleaning of the exteriors of passenger-equipment cars. There are many cleaning agents on the market. Most of these are of such a nature that if used properly they will not cause corrosion. On the other hand, some are not properly inhibited. Unless properly supervised and continually policed, the mixing of properly inhibited cleaning agents by indifferent or improperly trained employees may result in cars being cleaned both with a chemical solution which will not only ruin the paint, but will work behind such vulnerable parts as fluted side sheets and bring about thousands of dollars damage before it is discovered.

The introduction of the mechanical washer, on the other hand, has helped the situation because cars are washed at fewer locations. This might be detrimental, however, since one location will wash many more cars than where manual washing is done, and with the lapse of a few days, if an improper solution were used, far more damage would result than otherwise might have occurred. The same general situation prevails as far as the cleaning of the interior of cars is concerned. Many cleaners are available for this purpose which are harmless (if mixed in the proper proportions) to the paint generally used, but improper mixing of these cleaners may result in gradual deterioration of the interior finish, which would, of course, be nothing less than corrosion damage.

When all passenger car roofs were either painted black

or black car cement was used on them, it was fairly easy to decide when the paint needed renewing, and regular programs were set up to take care of this. Consequently, leaks seldom developed which allowed moisture to enter the car through the roof. When stainless steel or aluminum roof construction was substituted and no painting was required or desired, it might naturally be assumed that as far as roof leakage was concerned the problem was solved. This, however, has proved not to be invariably true. The nature of the material is such that, unless well reinforced, it will not stand employees walking over the roof without creating fractures. In some instances, where these fractures have developed and before they were discovered, large quantities of moisture entered through them and untold damage resulted.

#### Care in Minor Repairs

In the freight car repair yard where minor repairs are made, little consideration has ever been given to the application of patches or part side sheets in such a manner as to minimize the possibility of corrosion. A portable electric welder is now found in all these yards. Its proper use will insure that when a patch is applied, the edges, where moisture otherwise might enter, may be seal-welded at critical locations to insure against corrosion setting in.

Even when patches are riveted on or when new rivets are applied carelessness invites corrosion. Unless properly policed and instructed, men removing old rivets burn too large a hole in the sheet or shape so that the new rivet will not properly fill the hole, or no attempt is made to use a rivet of proper size with the result that the rivet head, though well formed, will not seal the opening. Even if it does, it will not be tight for long and moisture will enter these critical areas. Unless the supervisor is always alert, workmen will do a sloppy job of holding on and produce only a part of a rivet head and leave an opening that will allow water to drain into the areas where corrosion will immediately result.

All of these corrosion-preventing design and maintenance problems, together with many others not mentioned, must be approached seriously and intelligently. If they are, instead of 28.9 per cent of the maintenance dollar being spent to prevent corrosion on passenger cars and 33.5 per cent spent to prevent corrosion on freight cars, these figures can be reduced to 10 per cent and 15 per cent respectively, and in the end the American railroads will save in the order of \$110,000,000 a year and be equipped with rolling stock which will give far better availability and have a much greater service life than is experienced at present.



## Rock Island Film **Promotes Freight Service**

he magic of our modern industrial and agricultural horn of plenty is the magic of mobility—the magic of the greatest interchange of goods the world has ever known." This is the theme of a new sound color motion picture being distributed by the Chicago, Rock Island & Pacific as a part of its freight

promotion and industrial development program.

This motion picture—from which the adjacent still pictures were taken-depicts how the manufacture of one tractor, for example, requires the movement of material from thousands of places to one point, and then the movement of the completed tractor from the factory to the farm where it will be used. Likewise it graphically demonstrates how agricultural products and livestock must be transported several times before being ready for consumption and before being placed at the point of consumption.

The Rock Island is using this motion picture as a part of its freight service sales promotion and industrial development programs. In 1950, the road succeeded in locating 230 permanent new industries on its lines, estimated to produce an annual freight revenue of approximately \$4 million. In addition, 47 new grain elevators were constructed, and 24 existing grain elevators enlarged, at points served by the Rock

Island.

The company has acquired 350 acres of industrial land, some of which is now being filled, in Chicago's Calumet area; 152 acres were purchased in Des Moines. And the opening of the new Denver cutoff has made much Rock Island industrial "Wheels of property in the Denver area more attractive. "Wheels of Progress" helps to dramatize the service and facilities the

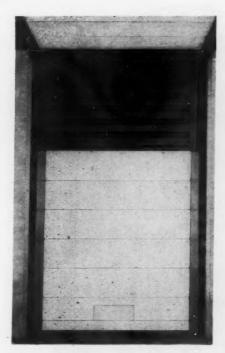
railroad has to offer shippers.

The 20-minute natural color picture was taken last summer by a camera crew which covered practically the entire 8,000-mile Rock Island system in 14 Mid-western states. It is being distributed free to interested civic organizations, Chambers of Commerce, and fraternal and traffic clubs to emphasize the function of the nation's railroads as the backbone of the transportation system, and to lure new industry and agricul-

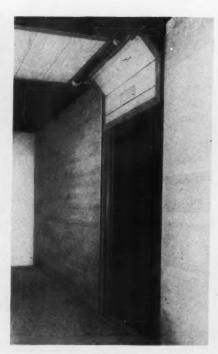
tural development into Rock Island territory.

Accompanying individual "stills" selected from the motion picture show a high speed "Rocket" freight crossing Kansas, the new high track standards to which the Rock Island's main lines have been built, a map, completed tractors emerging from a plant ready for shipment, the new automatic retarder hump yard at Silvis, Ill. (near Moline), and a C.T.C. operator at

Other typical shots from the film show such scenes as the bridge over the Cimarron river near Liberal, Kan., the booming oil district around Oklahoma City, centrally located stock yards at several points on the Rock Island system, Kansas City Union Station, a heavy freight in Iowa, the Rock Island's role as a major "granger road" during the annual "wheat tide," the Rock Island's access to ocean shipping at Houston and Galveston, and finally a passing freight conductor acknowledging receipt of a "highball" from a local station agent.



From left to right (above) the Utility All-Purpose Door is shown in three positions—closed and ready for loading, in process of opening or closing, and



stored out of the way when not in use. Right—When the all-purpose door is in the raised position, the opening is not obstructed in any way





## All-Purpose Grain-Tight Door

Service-Tested for Bulk and Miscellaneous Loads

A permanently installed grain-tight door now available for application to box cars prevents the loss of wheat, corn and other bulk commodities during shipment, and serves as side-door protection to freight in boxes, crates, bales and sacks. In addition to reducing loss and damage, the door, being a permanent installation, further eliminates the problems and expenses involved in purchasing, handling and installing the side door protection required for many shipments. No further cost is incurred by either the shipper or the railroad for barricading the door.

This device, named the Utility All-Purpose Door, operates on the same general principle as the modern overhead garage door. It is completely out of the way when not in use; one door nests over the other close to the roof of the car leaving the regular side doorways unobstructed for loading or unloading.

All hardware is disposed outwardly from the inside surface of the car, thus presenting a smooth, continuous surface to prevent damage to freight due to contact with door posts. For easy operation the doors are individually counter-balanced by a torsion spring and drum arrangement. Before being placed in service all operating

hardware was given an accelerated lifetime test of 5,200 full opening and closing cycles on a full size model.

The door consists of a pair of overhead doors operating on floating rollers running in steel channel tracks sturdily designed to withstand the normal impacts that might be expected during loading and unloading. Each door consists of a series of wood panels joined together, with a total height of 80 in. and extending across the width of the side door opening. If side-door protection above 80 inches is required, provision has been made for hooking the operating cables to the door posts so that a supplementary grain door can be nailed to the door posts on the inside of the car at the top of the utility door.

Additional protection against leakage is afforded by the arrangement of hinge plates on the insides of the door posts, sealing strip at the bottom, and the ship-lap construction of the wooden panels.

A small relief door is incorporated near the bottom of the Utility All-Purpose Door for unloading grain or other bulk commodities. Opening this relief door and allowing the grain to run out for a few minutes reduces (Continued on page 74)



#### MAGIC BOX SPEEDS FREIGHT

The touch of a finger on a numbered button throws all the switches necessary to guide a freight car to the proper track in a modern Illinois Central yard. This electronic control helps keep freight moving fast for Illinois Central customers.







#### NEW HEART FOR A GIANT

THAT'S 1500 units of smooth, brawny power being lowered into an Erie diesel locomotive at one of Erie's servicing shops—ready to go to work for a million miles on this busy railroad.

It was natural that Erie, with its forward-looking approach, should be one of the pioneer railroads to adopt the diesel locomotive. Today, the Erie has the highest percentage of diesel ownership of any railroad operating between New York and Chicago. This large fleet runs in tip-top shape 'round the clock, the result of efficient servicing in the modern shops designed and built specially for diesels by Erie engineers.

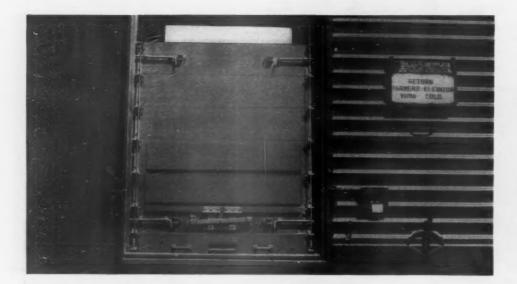
These diesel service stations are

another example of Erie's progressive railroading—the continuous search to improve the safe, dependable transportation of both passengers and freight. At the present time, when defense transportation must have high priority, speedy servicing of the railroad's motive power is one way of helping to serve our country well.

### Erie Railroad

Serving the Heart of Industrial America





Side door protection is provided for all kinds of freight, and the expense of barricading the regular car door is eliminated

(Continued from page 71)

the pressure against the main door, permitting it to be

raised easily.

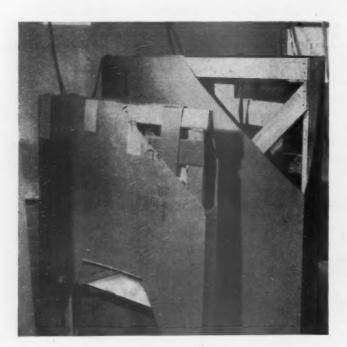
Twelve carload shipments were tested in a Burlington car using this door with an average length of haul of 370 miles. Ten of the shipments were grain in bulk—eight loads of wheat and one each of corn and mixed grain—with a weight average of 122,000 lb. No appreciable loss of grain was reported in any shipment. Two miscellaneous loads were also tested, one carload of 800 100-lb. paper sacks of sugar and one of a full

carload of empty tin cans. There was no damage to either shipment.

Speed in loading was demonstrated one day at Yuma, Colo., when the test car equipped with the Utility All-Purpose Door was brought in on the local freight and spotted at the elevator. Before the balance of the station switching was done, the car was loaded, ready to move.

The Utility All-Purpose Door is a product of the Richards-Wilcox Manufacturing Company of Aurora, Ill., represented by I. W. Preetorius, freight traffic consultant, and F. F. Frye, 20 No. Wacker drive, Chicago.

# How Package Engineering Has Cut Damage Claims



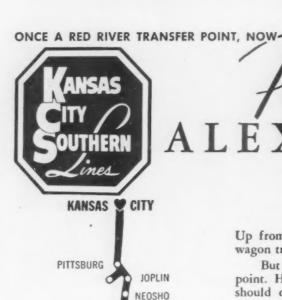
A reduction in the number of claims filed against carriers from 2.11 per cent of all packages shipped in 1946 to 0.68 per cent in 1950 has been the product of a modern package engineering program instituted under the direction of the general traffic department of Spiegel's, Inc., nationwide mail order and retail merchants at Chicago. The value—to shipper and carrier alike—of such a program was demonstrated in a "packaging progress exhibition" sponsored by Spiegel's in connection with this year's "Perfect Shipping" campaign.

The program of controlled packaging has proved so

The program of controlled packaging has proved so successful in reducing the incidence of damage, as well as the number and value of damage claims, that Spiegel's (Continued on page 77)

Vanity mirrors were originally received from the supplier in 200-lb. test corrugated, full-overlap, end-opening cartons (smaller package on the left). Experience showed that this package, which meets A.A.R. commodity requirements, was not adequate, resulting in 25 to 35 per cent shipping damage returns. The Spiegel-engineered package to the right, with the mirror fastened to a wood frame on suspension cleats, and wrapped in 200-lb. test corrugated cardboard, reduced damage performance to 3 per cent





# Feople Come to ALEXANDRIA, LA. to Stay!

Up from New Orleans to Alexandria by steamboat . . . then on by wagon train . . . was the route of settlers bound for Texas.

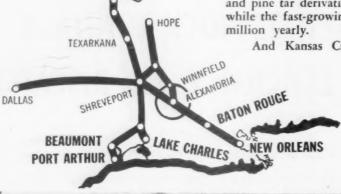
But the early Red river outpost had other plans than being a transfer point. Here in the center of Louisiana was everything a homeseeker should desire!

People now come to Alexandria to stay, for the city dominates a trade territory of a half-million population, blessed with a wealth of timber, oil and rich farm lands.

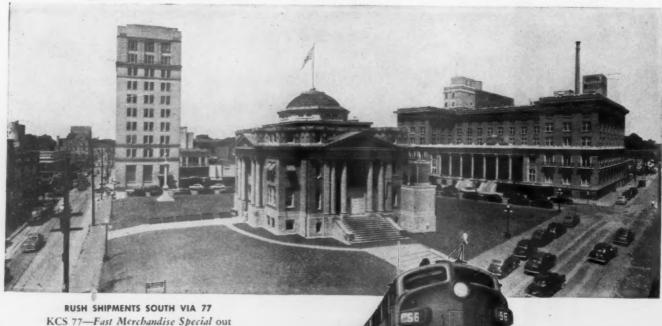
Cotton and cottonseed, lumber, flooring, shingles, brick, turpentine and pine tar derivatives are among the leading products of Alexandria, while the fast-growing livestock industry brings the city more than \$10 million yearly.

And Kansas City Southern Lines—shortest, quickest rail route between five great Gulf Ports and Kansas City—play an important role in speeding the area's yield to market and in supplying Alexandria with its incoming needs.

J. Sest.
Vice President - Traffic



FT. SMITH



RUSH SHIPMENTS SOUTH VIA 77 KCS 77—Fast Merchandise Special out of Kansas City at 8:40 nightly—connects with the through service of other lines and speeds freight South-Southwest!

Representing
KCS LINES AT ALEXANDRIA
D. S. LAMBETH, General Agent
B. T. HARRISON. Commercial Agent



(Continued from page 74)

is now gradually revising its purchasing agreements with many thousands of suppliers to insist that all merchandise be furnished in packaging which will meet Spiegel standards. These standards are set by a container engineer working for Spiegel, and are based on a combination of experience and experimentation.

F. W. Spiegel, vice-president, in explaining the company's reasons for undertaking such a project, explains that in the mail order business repeat orders depend to a great extent upon the condition in which merchandise is received by the buyer. It is, therefore, important that Spiegel's be certain that merchandise is adequately and properly packaged. Further, Spiegel's, which spends upwards of \$1½ million on transportation a year, feels that it will recover some of the cost of its program to the extent that it helps keep transportation costs—and hence freight rates—down.



Above—Dinner china has been received from the potteries for many years in a 200-lb. test carton, with the component parts nested in straw, hay, or wood excelsior (rear package). Shipping damage performance with this package averaged 10 to 12 per cent. With an engineered slotted carton, with inner compartments designed to accommodate various types of nested pieces, damage performance was reduced to less than 3 per cent

Above left—The original 200-lb. test carton (on the left) had a plywood skid bottom fastened to the television cabinet with one nail at each corner. Two crossed "jiffy pads" were folded in to maintain top and side clearances. Over a sixmonth period this package produced damage returns ranging from 12 to 30 per cent of total number shipped. The new Spiegel-engineered package has a 350-lb. test carton with a diagonally-braced wood skid floating on the bottom of the carton, and not fastened to the cabinet. All finished surfaces of the cabinet are wrapped in wax treated paper with reverse-scored corrugated buffer pads placed top and bottom to allow 1½-in. clearance on all four sides. An additional flat corrugated pad is placed on top of the cabinet to maintain a minimum 1-in. cushion

Below—Excelsior-wrapped upholstered chairs are allowed under A.A.R. classification requirements, but Spiegel found this method of wrapping resulted in damage returns between 8 and 10 per cent. By paying the supplier approximately fifty cents more per unit, the improved carton pack shown at the right was obtained, and damage returns have dropped to less than one per cent





WHETHER YOU'RE SHIPPING from the Northwest—Chicago, Detroit, Toledo, Cleveland—or from the Virginias, Carolinas and the Southeast to the western areas, the Chesapeake and Ohio offers you a "daily double" speed schedule via "The Expediter" east-bound and "The Speedwest" westbound. Yes, your freight really travels on the double when it travels aboard either of these speed-merchants—for on either

run you save a full day. "The Speedwest" operates from Norfolk-Newport News, the Carolinas and the Southeast to Chicago, Toledo, connecting at Toledo with Pere Marquette District trains for Michigan and the Northwest via C & O car ferry service. "The Expediter," in the opposite direction, speeds freight from the Northwest and the Great Lakes area to the Virginias, the Carolinas and the Southeast.

So whether your freight is eastbound or westbound, you're bound to save a day the C & O twin-speed way.



HESSIE ROUTE FOR FAST FREIGHT

CHESAPEAKE AND OHIO RAILWAY



#### **GENERAL NEWS**

#### U.P. Tests Anchor Plates

(Continued from page 45) on each side of the doors so that transverse steel strapping can give the greatest support to bulkheads on both single- and double-deck loads.

By installing these permanent anchor plates, the U.P. expects to slow the inevitable down-grading of box cars that results from continual nailing in and ripping out of temporary strapping support plates by each in dividual shipper. The shipper will benefit, too, by eliminating the labor required to prepare the car for each shipment, and by the superior sup-porting strength of the permanent as compared to the temporary-brac-

The U.P. has indicated that, after results of the test have been tabulated, additional box cars may be equipped with these plates.

#### Controls Set-up Extended Until June 30, 1952

The federal government's set-up of controls has been extended until June 30, 1952, under provisions of legislation which was signed by President Truman on July 31. The legislation, enacted recently by Congress, is embodied in the "Defense Production Act Amendments of 1951."

The controls involved include those administered by the Defense Transport Administration. Also involved are controls relating to prices, scarce materials, and wages. In the latter connection the legislation added to the former Defense Production Act new provisions relating to wages in the railroad industry. Those provisions provide:

"That the President shall administer any controls over the wages or salaries of employees subject to the Railway Labor Act, as amended, through a separate board or panel having jurisdiction only over such employees.

"That in any dispute between employees and carriers subject to the Railway Labor and carriers subject to the Railway Labor Act, as amended, the procedures of such act shall be followed for the purpose of bringing about a settlement of such dispute. Any agency provided for by such act, including any panel or panel board established by the President for the adjustment of disputes arising under the Railway Labor Act, as a prerequisite to Railway Labor Act, as a prerequisite to effecting or recommending a settlement of such dispute, shall make a specific finding and certification that the changes proposed by such settlement or recommended settlement, are consistent with such standards as may then be in effect, established by or pursuant to law, for the purpose of controlling inflationary tendencies.

"That in any non-disputed wage or salary adjustment proposed as a result of voluntary agreement through collective bargaining mediation or otherwise the

bargaining, mediation, or otherwise, the same finding and certification of consis-tency with existing stabilization policy

shall be made by the separate panel, chairman thereof, or boards, as established

and authorized by the President.
"Where such findings and certification are made by such agency, panel, chairman thereof, or boards, they shall after approval by the Economic Stabilization Administrator be conclusive and it shall be lawful for the employees and carriers, by agreement, to put into effect the changes proposed by the settlement, recommended settlement, or voluntary proposal with re-spect to which such findings and certifica-tion were made."

#### Freight Car Loadings

Loadings of revenue freight in the week ended July 28 totaled 819,875 cars, the Association of American Railroads announced on August 2. This was an increase of 15,305 cars, or 1.9 per cent, compared with the previous week; a decrease of 25,136 cars, or 3 per cent, compared with the corresponding week last year; and an increase of 95,831 cars, or 13.2 per cent, compared with the equivalent 1949 week.

Loadings of revenue freight for the week ended July 21 totaled 804,570 cars; the summary for that week, as compiled by the Car Service Division, follows .

A.A.R., 10110	WS.		
		AR LOADIN Saturday, Ju 1950	
Eastern	136,896	148,076	126,852
Allegheny	168,760	170,476	136,470
Pocahontas	66,205	64,766	45,457
Southern	120,907	123,550	100,683
Northwestern .	138,152	137,518	133,083
Central West'n	119,334	122,999	119,360
Southwestern .	54,316	62,691	56,611
Total Western			
Districts	311,802	323,208	309,054
Total All Rds.	804,570	830,076	718,516
Commodities:			
Grain and grain			
products	57,646	57,676	75,161
Livestock	6,512	6,931	8,353
Coal	149,435	160,010	104,573
Coke	16,211	14,719	8,575
Forest products	45,826	49,365	38,272
Ore	89,950	84,345	77,618
Merchan, I.c.I.	67,250	80,169	85,403
Miscellaneous .	371,740	376,861	320,561
July 21	804,570	830,076	718,516
July 14	779,454	789,406	724,183
July 7	588,246	553,910	595,321
June 30	821,615	783,520	644,182
June 23	832,942	809,971	802,941

Cumulative total 29 weeks . . 22,089,674 20,058,142 20,775,102

In Canada.—Car loadings for the week ended July 21 totaled 84,756 cars, compared with 82,925 cars for the previous week and 80,533 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

Statistics.	Revenue Cars	Rec'd from
	Loaded	Connections
Totals for Canada:		
July 21, 1951	84.756	32,429
July 22, 1950	80,533	33,109
Cumulative totals for Cana	ida:	
July 21, 1951		1,017,932
July 22 1950		889 894

#### O.P.S. Protests Commuter Fare Increase in East

The Office of Price Stabilization has filed with the Interstate Commerce Commission protests against commutation fare increases proposed by a number of Eastern roads. (Railway Age, July 16, page 34.)

The agency said the proposed increases would be "unreasonable and discriminatory," and would be inflationary because they would increase the cost of living of commuters.

#### D. P. A. Announces C. M. P. **Allotments For 4th Quarter**

The railroad program has been allotted 1,872,425 tons of steel, 64,355,-000 pounds of copper, and 8,500,000 pounds of aluminum under the Controlled Materials Plan for this year's fourth quarter. This and other fourthquarter allotments were announced July 27 by Manly Fleischmann, administrator of the Defense Production Administration.

Other allotments included those to the Bureau of Public Roads—250,050 tons of steel, 1,150,000 pounds of copper, and 520,000 pounds of aluminum.

#### Carriers Seek Details Of Arbitration Offer

Spokesmen for the railroads in the pending wage and rules disputes with three "op" brotherhoods have put off their decision on whether the case should be submitted for arbitration.

In a joint letter to the National Mediation Board on July 30, the Carriers' Conference Committees asked that they be "specifically advised" as to what the brotherhood chiefs propose to arbi-

"In view of the confusion as to what is properly in 'controversy' and in order that the carriers' committees may give appropriate consideration to the proposal of the brotherhood chiefs, they believe they should be specifically advised as to the items the brotherhood chiefs propose be submitted for arbithe letter read. tration.

The letter asked the board to "ascertain exactly" what is proposed by the three unions—the Brotherhood of Locomotive Engineers, Brotherhood of Locomotive Firemen & Enginemen, and the Order of Railway Conductors. It requested the board to furnish the carriers this information "in writing."

This latest action in the long-pending wage and rules dispute followed decision to refer the case back to the White House because negotia-tions are "deadlocked" and mediatory efforts have proved "unavailing."

The board advised the carriers and the unions of this decision in a letter on July 24. On the same day the chief executives of the three brotherhoods replied that they were willing to arbitrate the disputes, "provided a satisfactory agreement can be reached with the carriers, and provided further that the agreement to arbitrate is made contingent upon the parties agreeing upon the neutral arbitrator or arbitrators, or on a mutually satisfactory arrangement for selecting him or them." Age, July 30, page 21.)

In a joint statement issued with their

letter the union chiefs said they were "surprised" at the board's decision to refer the case to the President "before exhausting its own efforts under the Railway Labor Act." This reference was aimed at the failure of the board "to induce the parties to submit the controversy to arbitration."

Meanwhile, in a July 25 speech in the Senate, Senator Morse, Republican of Oregon, said he was "disappointed" at the mediation board's failure to formally suggest arbitration to the parties. He said this case "has gotten itself into such an awful mess, at both mediation board and White House levels, that the only way to bring reason and common sense to its settlement is by way of arbitration."

The senator said that "for the life of me I cannot understand the attitude of the carriers," and added that he thought they had made "some very serious mistakes in judgment" in the handling of this case.

#### Railroads Would Speed Write-Off of \$2.7 Billion

Railroads, as of June 26, had filed 974 applications for accelerated amortization of facilities expected to cost a total of \$2,661,409,703, according to figures compiled at the Association of American Railroads. Of these applications, 212, involving facilities expected to cost \$1,024,465,812, had been approved.

Fifteen applications involving facilities expected to cost \$71,329,813 had been denied. Thus the pending applications on June 26 totaled 737, and they involved facilities expected to cost a total of \$1,565,614,078. Other figures in the A.A.R. compilation included those in the accompanying table.

those in the accompanying table.

Meanwhile, the Defense Production
Administration's latest report on the
matter revealed that one railroad, the

#### A.A.R. Data on Accelerated Amortization

	Certified		Pending	
Type of Facility	Number	Gross Cost	Number	Gross Cost
Freight cars Locomotives Passenger cars Miscellaneous projects	103,535 2,345 38 48	\$583,124,732 381,028,873 3,345,000 56,967,207	120,302 3,898 316 452	\$706,632,288 636,300,211 39,679,436 183,002,143

Baltimore & Ohio, was awarded an accelerated-amortization certificate during the period of July 20-27. The facilities involved are expected to cost the B,&O. \$3,500,000; and the certificate permits the writing off of 50 per cent of that amount in five years.

#### G.M. & O. Moves Its Chicago Freighthouse

The Gulf, Mobile & Ohio has moved its Chicago freighthouse from Harrison street, close to the "Loop" district, to a newly enlarged building at Brighton Park yard on the city's southwest side. The downtown freighthouse has been sold to the Post Office Department. It is not known how the department plans to change the structure for service as an adjunct to the nearby main post office building, but Chicago postal officials have indicated that it will be used to provide additional tailgate space in connection with the department's program for handling mail by truck for distances of 200 miles or less.

The new G.M.&O. freighthouse at Brighton Park was built in part about three years ago. Recently it was enlarged at an expenditure of some \$400,000 to permit handling all inbound and outbound freight for city shippers and consignees. The transfer of operations from the old to the new freighthouse was accomplished almost overnight. All materials handling equipment and undelivered freight were transferred to Brighton Park in a quick move that had little,

if any, effect on movement of freight involved. The location of the new freighthouse, 3710 South California avenue, has permitted pickup and delivery trucks to move much faster than they could in the congested streets around the old freighthouse, a company spokesman told Railway Age. "From our standpoint," he said, "it was an economic move all the way round."

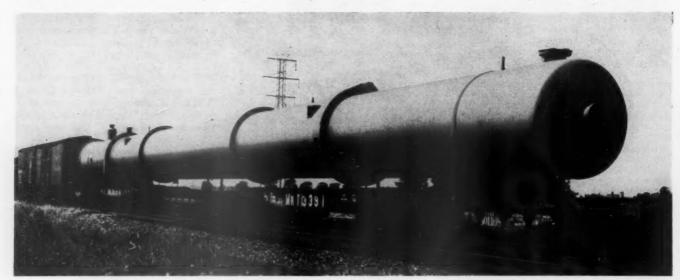
#### New Haven Drops Extra Fare on "Merchants"

Beginning August 6 there will be no special service charge on the fare of the New York, New Haven & Hartford's New York-Boston "Merchants Limited." The extra charge, \$1.05 plus tax, was eliminated "to encourage additional travel" on the train, Frederic C. Dumaine, Jr., president and chairman of the New Haven, explained. There will be no change in schedule, running time or equipment.

#### Examiner Would Approve N.Y.-Miami L.C.L. Pool

Examiner John A. Russell has recommended that the Interstate Commerce Commission approve an agreement between five railroads, covering the handling of l.c.l. traffic in through cars from New York to Miami, Fla.

The five roads are the Pennsylvania; Richmond, Fredericksburg & Potomac; Seaboard Air Line; Atlantic Coast Line, and Florida East Coast. They propose that the P.R.R. and the



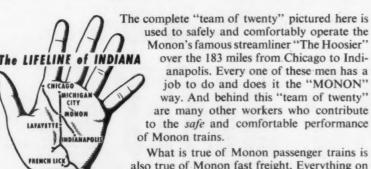
ANOTHER WHOPPING RAIL SHIPMENT that illustrates the obligation of a true common carrier to transport anything and everything offered for shipment. "The thing" is a 183-foot 235,000-lb. steel retort for the Tama, lowa, plant

of the Iowa Wood Preserving Company. Shipped recently from Joppa, III., to Tama via the Chicago & Eastern Illinois, the Elgin, Joliet & Eastern and the Chicago & North Western, the retort is 16 feet, 5 inches high and 9 feet, 8 inches wide

### DID YOU REALIZE.



"Team of Twenty" to operate the famous "Hoosier" streamliner?



What is true of Monon passenger trains is also true of Monon fast freight. Everything on the Monon is a "team" job. And every man and

woman employed by the road is keyed to carry out his or her part of the operation efficiently.

It is this fine "team spirit," from top offices to

the man in the yards, that enables the Monon to deliver service-with-a-plus to freight customers as well as to passengers. Have you tried this "plus" service lately?

There are 22 Monon on-line and off-line agencies across the nation, serving shippers. Why not contact the one in your city and find out what this service-with-a-plus really offers you?





THE HOOSIER LINE

INDIANAPOLIS AND LOUISVILLE RAILWAY COMPANY

#### CAR SURPLUSES, SHORTAGES

Average daily freight car surpluses and shortages for the week ended July 28 were announced by the Association of American Railroads on August 1 as

	Surplus	Shortage
Plain Box	5,135	5,444
Auto Box	73	42
Total Box	5,208	5,486
Gondola	0	4,432
Hopper	0	3,588
Covered Hopper	0	73
Stock	1,384	78
Flat	8	963
Refrigerator	1,215	0
Other	259	91
Total	8,074	14,711

R.F.&P. move the consolidated l.c.l. cars to Richmond, Va., and from that point to Miami the shipments would go via S.A.L. one week and via A.C.L.-F.E.C. the next. (Railway Age, December 2, 1950, page 80.)

In his proposed report Examiner Russell said pooling of this l.c.l. traffic would enable the roads to meet freight forwarder and motor carrier competition. He noted that the five roads now handle about 21 cars of l.c.l. to Miami each month, while forwarders handle about 160 cars a month. The examiner also said the plan would conserve cars, reduce transit time, and result in savings to the carriers of about \$47,-

700 a year.

I.C.C. approval of the pooling plan would permit the five roads to continue an operating arrangement established during World War II under authority from the Office of Defense Transportation.

#### I.C.C. Grain Rate Ruling Set Aside by Court

An Interstate Commerce Commission order turning down a proposal for a reduction of one-half cent per hun-dredweight in railroad rates on export grain moving from Buffalo and other Great Lakes ports to New York,

#### MORE L.C.L. SCHEDULES: ONE SUPPLEMENT

Merchandise car schedules have been received from the following railroads; Chicago, Burlington & Quincy; Delaware, Lackawanna & Western;

Denver & Rio Grande Western; Soo Line (Minneapolis, St. Paul & Sault Ste. Marie);

New York Central-Supplement No. 1 to its "Scheduled Merchandise Cars"; Pennsylvania; and Southern.

Boston and Portland, Me., has been set aside by a panel of three judges in the United States District Court in Boston. (Railway Age, December 23, 1950, page 34, and June 3, 1950, page

The rate reduction, requested by the New York Central, the Boston & Maine, the Lehigh Valley and the Dlaware, Lackawanna & Western. would produce rates equal to those on similar shipments to Baltimore and Philadelphia. If within 30 days there is no appeal from the decision, the four roads can file new tariffs with the I.C.C. putting the rate reduction into effect.

#### Test of Shale Oil for **Diesels Called Success**

A five-week road test in which Denver & Rio Grande Western switching locomotive No. 100 operated on diesel fuel made from shale oil in the Bu-reau of Mines' oil-shale demonstra-tion plant near Rifle, Colo., has been pronounced a complete success by E. A. Perlman, general manager of the

road, and J. H. East, Jr., regional director of the bureau. (An illustrated feature story about the demonstration plant appeared in Railmay Age, September 2, 1950, page 56.)

The shale oil product performed as well as standard diesel petroleum fuel normally used by railroads, Mr. Perl-man and Mr. East said, and inspection of the engine after the test disclosed only normal wear and carbon deposition. A small amount of gum was found on the filters, but this can be eliminated in the refining stage, according to members of the bureau's refining staff at Rifle.

The experiment was made under cooperative agreement between the Rio Grande and the bureau, with the former supplying a 1,000-hp. 12-cylinder diesel unit and the bureau providing 5,180 gal. of fuel oil. The first limited test of shale oil diesel fuel in a locomotive took place on September 1, 1950, when the Rio Grande's "Prospector" made a successful run from pector" made a successful run from Salt Lake City to Denver (Railway Age, September 9, 1950, page 76). Further tests are under consideration.

#### EQUIPMENT AND SUPPLIES

#### **Domestic Equipment Orders** Reported in July

Domestic orders for 49 diesel-electric locomotive units and 4,320 freighttrain cars were reported in Railway Age in July. Estimated cost of the locomotive units is \$7,821.000, and of the freight-train cars \$27.455,000. An accompanying table lists the orders in detail.

During the first seven months of 1951, Railway Age has reported domestic orders for 1,566 diesel-electric locomotive units and six steam locomotives costing an estimated \$251,614,777; 61,-908 freight-train cars costing an estimated \$355,000,000; and 122 passenger-train cars costing an estimated \$17 485 000

#### FREIGHT CARS

The Atchison, Topeka & Santa Fe has ordered 150 40-ft., 70-ton gondola cars from its own Cleburne shops.

		Locomotives	i
urchaser . & O	No. 8* 1	Type 1,200-hp. Switching 1,500-hp. "B" Frt. 1,500-hp. RdSw.	Reported July 2 July 30 July 30 July 30 July 30
	4 2 1	1,000-hp. Switching 1,600-hp. RdSw. 1,600-hp. RdSw. 1,000-hp. Switching	July 30 July 30 July 30
e. C	1	1,200-hp. 1,500-hp.	July 2 July 2
.Y. N.H. & H	10	1,600-hp. Switching	July 9

N. 

2-unit 4,500-hp. Road 1,600-hp. Rd.-Sw.

Locomotives

Builder
Electro-Motive
Electro-Motive
Electro-Motive
Electro-Motive
Baldwin-Lima-Hamilton
American-G. E.
American-G. E.
Electro-Motive
Electro-Motive
American-G. E.
American-G. E.
Electro-Motive
American-G. E.

\*For use on the Baltimore & Ohio Chicago Terminal.

Englishs Com

	rreight Cal	rs
. & S.F 200	70-ton Tank	July 23
& O 500	70-ton Cov. Hopper	July 2
& N.W 250	70-ton Cov. Hopper	July 23
& L 250	50-ton Box	July 23
. & W 100	70-ton Cov. Hopper	July 23
.W 250	50-ton Box	July 23
250	70-ton Triple Hopper	July 23
r. N.H. & H 550	70-ton Hopper	July 2
100	Caboose	July 23
S. Army 2	Unicel	July 9
418	50-ton Box	July 9
bash	40-ton Box	July 2 July 2
300	50-ton Box	July 2
50	70-ton Gondola	July 30
100	70-ton Cov. Hopper	July 30

Unreported Greenville Steel Car Pullman-Standard r. Car & Fdy. r. Car & Fdy. eral American nan-Standard Pullman-Standard R.R. Shops Pressed Steel Car Pullman-Standard Amer. Car & Fdy. General American Greenville Steel C Pullman-Standard



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#### BALTIMORE & OHIO RAILROAD

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The **Southern** has ordered 300 70ton hopper cars from the Pullman-Standard Car Manufacturing Company. The road's announcement said that the cars, costing a total of about \$2,000,000, would be built at Pullman's Butler, Pa., plant; and that deliveries on the order would begin October 1.

#### LOCOMOTIVES

#### M.P. to Order 126 Diesel Units Costing \$20,823,000

The Missouri Pacific Lines have been authorized by the United States District Court in St. Louis to spend \$20,823,000 for 83 diesel-electric locomotives comprising 126 units. Forty units will be used in road freight service, 55 will be road-switchers, 18 will haul passenger trains and 13 will be yard switchers. Of the total, 101 units will be radio equipped. The new diesels will permit retirement of 164

steam locomotives.

When the equipment is received early next year, P. J. Neff, chief executive officer, said, "the railroad will have in operation about 700 diesel units, enabling it to dieselize completely all trains west of St. Louis to the Colorado Rockies and south from St. Louis to Bismarck, Mo. Operations at St. Louis and Kansas City, including all yard switching, will be performed by diesels." On the Gulf Coast Lines and the International-Great Northern, he added, all trains south of Ft. Worth and Houston to the Mexican border will be diesel operated.

When delivery of the 126 units has been completed, the M.P. estimates that 84 per cent of its freight grosston miles, 90 per cent of its passenger train-miles and 70 per cent of its yard switching locomotive hours will be performed by diesel power.

The Canadian Pacific has ordered 28 diesel-electric locomotive units for passenger and freight service on its Laggan and Mountain subdivisions in the Canadian Rockies between Calgary, Alta., and Revelstoke, B. C. The order was placed as follows: General Motors Diesel, Ltd.—18 1,500-hp. units for delivery beginning in September: Montreal Locomotive Works—10 1. 600-hp. units, of which two have been delivered. This equipment will replace Selkirk-type steam locomotives used in for heavy mountain work. the area Among the displaced units will be locomotive No. 5935, probably, the road says, the last steam locomotive to be acquired by the C.P., being the last of an order for six delivered in 1949. (A photograph of No. 5935 appeared in Railway Age, May 28, 1949, page 50). Earlier this year the C.P. ordered

Earlier this year the C.P. ordered six 800-hp. switching units from G.M.D. and a like number of 660-hp. switching units from M.L.W. These have been delivered.

The Chicago & Eastern Illinois has ordered four 1,500-hp. general purpose diesel-electric locomotive units from the Electro-Motive Division of General Motors Corporation at an estimated cost of \$600,000. Two units will be delivered this month and two in September.

#### SIGNALING

The New York Board of Transportation has ordered from the Union Switch & Signal Division of Westinghouse Air Brake Company material to install new automatic signal and interlocking facilities on the Third Avenue line between 149th and 219th streets. In addition to five lots of material to add controls to existing interlocking machines, and three new track models, the order includes daylight type color-light signals. electropneumatic train stops, relays, rectifiers, switch circuit controllers and housings, etc.

The New York Central has ordered from the General Railway Signal Company equipment to install a remote control interlocking at Vulcan. Ohio. The control machine, to be located at Air Line Junction, will have 11 track lights and 15 levers for control of two switches and 11 signals.

#### MARINE

The New York, New Haven & Hartford has ordered two tugboats from the Cleveland Diesel Engine Division of General Motors Corporation.

#### SUPPLY TRADE

Felix R. Hulser has joined Goodall-Sanford, Inc., as manager of Mill "B" in Sanford, Mass., in charge of manufacturing fabrics for the automotive, furniture and transportation industries. Mr. Hulser formerly was superintendent of the pile fabrics division of Cheney Brothers, Manchester, Conn.

The Chicago Steel Service Company has moved to new general offices and warehouse on Kildare avenue at 45th street, Chicago.

The Federal Telephone & Radio Corp., Clifton, N. J., has appointed the Graybar Electric Company as national distributor of its railroad communications and signaling equipment.

A new aluminum smelting plant, said to be the first in history to use lignite (sub-bituminous coal) for fuel, will be built by the Aluminum Company of America. Application has been filed to begin construction of the



C. S. White, who has been appointed manager of the eastern division of the Dearborn Chemical Company, at New York, to replace the late Herbert J. Cornell, former vice-president, eastern division, whose death was reported in Railway Age, July 23, page 61. Mr. White was formerly manager of the eastern division water treatment department

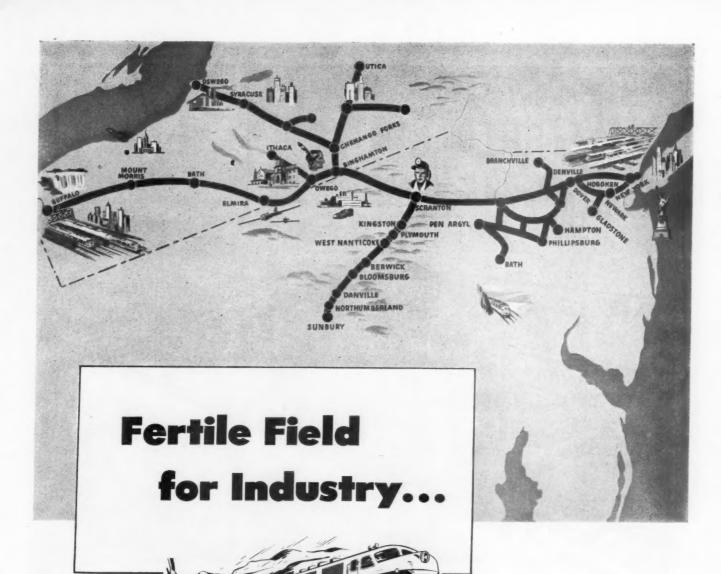
plant in the immediate future at one of several alternate locations approximately 60 miles south of Waco, Tex. Production of metal is expected to start in the early fall of 1952, with a capacity of 85,000 tons of aluminum annually.

The **Heli-Coil Corporation**, Long Island City, N. Y., has moved to a new plant in Danbury, Conn.

R. M. Stadick, formerly general traffic manager of the Warner G. Smith Company, has been appointed traffic manager of the Willard Storage Battery Company, succeeding M. M. Twohig, whose retirement was announced in Railway Age July 2, page 78. A. J. Weber has been appointed assistant traffic manager.

The following personnel changes have been made in the railway sales division of the Budd Company: Thomas R. Wagner, head of the New York office, has been appointed regional sales manager at Chicago, succeeding John E. Wright, resigned. Robert A. Sherman, formerly in charge of the St. Louis office, will succeed Mr. Wagner at New York. The St. Louis office will be closed September 30 and its functions will be transferred to the Chicago office. Percy R. Keller, operating from general headquarters in Philadelphia, has assumed the duties of James M. Plaskitt, who has resigned as head of railway sales activities in Washington, D. C.

Establishment of a tramway division by the Columbia Steel Company has been announced by this west coast subsidiary of the United States Steel Corporation. The division will be (Continued on page 87)



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### Lackawanna Railroad



SHIPPERS WHO ARE IN THE KNOW, CHOOSE THE ROUTE OF PHOEBE SNOW



(Continued from page 84)

under the management of Gordon H. Bannerman. The tramway division-believed to be the first such organization in the country-has announced that it is in a position to act as a prime contractor for any tram-way project in the United States. Mr. Bannerman says the division is prepared to design complete tramway systems and to furnish all track cable, wire rope fittings, and mechanical and electrical equipment. It will also contract for foundations, steel work and all erection work for tramway projects, cableways and suspension bridges. The division's headquarters are located at 141 Battery street, San

T. W. Merrill has been appointed chief metallurgical engineer of the Vanadium Corporation of America and has been transferred from the company's plant at Bridgeville, Pa., to headquarters in New York. Mr. Merrill was graduated from the Yale School of Engineering in 1936 with a B.E. degree, after which he joined the



T. W. Merrill

United States Steel Corporation as a metallurgical observer at the Duquesne Works. In 1939 he was transferred to the research laboratory at Kearny, N. J. Two years later he joined Vanadium at Bridgeville, as metallurgist. He was appointed metallurgical engineer in 1949, the position he held at the time of his recent promotion.

#### CONSTRUCTION

#### L. & N.-N.C. & St. L. Plan New Joint Nashville Yard

Tentative plans for construction of a new \$14 million hump and retarder yard at Radnor, just outside of Nashville, Tenn., for joint use by the Louis-ville & Nashville and the Nashville, Chattanooga & St. Louis have been revealed by those two roads. The plans
—which are being held up pending release of 205 acres of needed ground held by the federal government will involve practically complete reconstruction of the existing Radnor yard of the L. & N. into a completely modern receiving and classification yard. The two roads, which interchange an average of 12,000 cars a month at Nashville, now have separate yards — the L. & N. at Radnor, and the N.C. & St.L. in downtown Nashville adjacent to the Union Station.

The new yard-which will be at the point where lines of the two railroad systems cross — will be constructed by the L. & N. and used by the N. C. & St. L. on a joint tenancy basis. It will permit removal of the cramped and inadequate N.C. & St. L. yards in downtown Nashville, clearing the way for a new commercial development at this important downtown location. It is expected that this development - which will be undertaken by outside interests on rights leased from the N. C. & St. L. will cost between \$50 and \$100 million, and will call for construction of retail stores, distribution warehousing facilities, and parking areas. The land now occupied by the N. C. & St. L. yards is below street level. Approximately 11/2 million square feet of land will be vacated, and an additional half million square feet will be available at street level on air rights. The railroad will retain sufficient trackage in the area for movement of its through freight trains, and of passenger trains into and out of Union Station. The yards now bisect downtown Nashville, so it is anticipated that this new commercial development will be a boon to the city.

By moving its operations from its present inadequate downtown yard to suburban Radnor, the N. C. & St. L. expects to achieve substantial improvements in its Nashville terminal operations. The L. & N. will likewise benefit from construction of the new yard, which will be tied in to the "Dixie main Nashville-Chattanooga route by a new four-mile connection to be built as its part of the project. This new line will open a new and desirable industrial area for development by both roads.

Atlantic Coast Line .- The following projects have been authorized at the indicated probable costs: Track facilities at Graingers, N. C. 111). and drainage between Atlanta and Stratford, Ga. (\$38,797).

Baltimore & Ohio.—This road will replace one of its mainline bridges in Baltimore at an approximate cost of \$1,000,000. The bridge to be replaced was built in 1894 and is a four-track curved structure about 500 feet long which carries the B. & O.'s main line over Jones' Falls, the Falls road and tracks of two other railroads north of the B. & O.'s Mount Royal Station. Track rearrangement will involve elimination of two of the five tracks in the station, leaving two mainline tracks and

a siding for Pullman cars. The signal system for trains will be modified and interlocking and signalling operations now controlled by two towers will be combined under control of one operator. Work already has started on the program, which is expected to take two years to complete. Road maintenance-of-way forces will rearrange the tracks. The contract for paving station platforms was awarded to Steiner Construction Company, Balti-more. Contract for the new bridge

work has not yet been let.
This road has also awarded contracts to the Empire Construction Company for work on bridges 491, 593 and 752 at, respectively, Sisterville, W. Va., Raven Rock and Coger; to W. M. Brode Company for work on bridge 1690, York, W. Va.; to Vogt & Conant for work on bridge 265, Johnstown, Pa.; and to C. F. Engelhart for work on bridge 79½, Valley City, Ohio. Estimated cost of

this work is \$165,000.

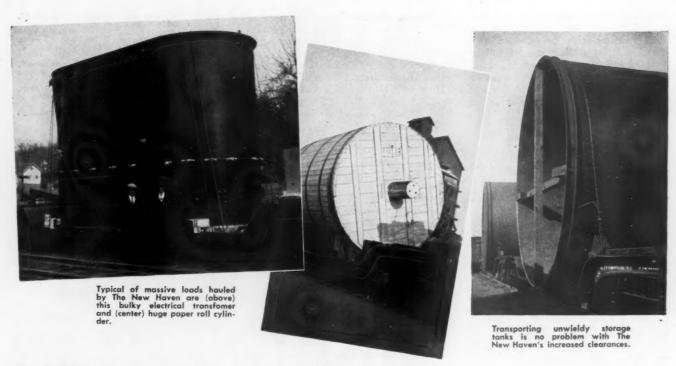
Florida East Coast.—This road has awarded a contract to Powell Bros., Inc., for encasement with concrete of steel piles on bridge 260.93. Stuart, Fla., at an estimated cost of \$115,000.

Indiana Harbor Belt.-A general expansion and improvement program centering around yard and shop facili-ties at Gibson (Hammond) Ind., has been announced by this affiliate of the New York Central system. When completed, the improvement program is expected to permit classification of 3,-800 cars per day at Gibson, thereby speeding interchange of through freight with all connecting roads, as well as speeding service to and from industries on I.H.B. lines in the Chicago metropolitan area. The program calls for enlarging eastbound and westbound classification and receiving yards at Gibson, improving grades in the hump yard, and new diesel maintenance facilities. Initial stages of the program include grading of the classification vards, extension of two tracks and construction of two more. The enginehouse at Gibson is being converted into a diesel locomotive maintenance and repair shop (the I.H.B. is fully dieselized). Other improvements include construction of a concrete block office, locker and washroom building.

New York Central.—This road is constructing at Utica, N. Y., service platforms for a large number of diesel-electric locomotives to be used in local yard switching and road operations. Work will be completed this year. Facilities will include an oil fueling station with a 200,000-gallon storage tank, sanding equipment and floodlights. Work is being done near the present steam engine terminal, east of the passenger station.

Reading.-Contracts have been awarded to J. E. Brenneman Com-(Continued on page 90)





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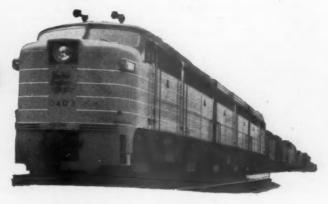
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(Continued from page 87) pany, Philadelphia, for repairing waterfront facilities there at an estirepairing mated cost of \$200,000; and to the Haverstick-Borthwick Company, Philadelphia, for installing diesel fuel facilities in the enginehouse at 9th and Green streets at an estimated cost of

#### FINANCIAL

Central Indiana.-New Directors. -At a meeting of the board of directors on July 12 the following new directors were elected: Herman H. Pevler, vice-president, Western region, Pennsylvania, Chicago; B. Voorhees, vice-president, New York Central, New York; J. J. Brinkworth, vice-president, Lines West N.Y.C., Chicago; J. Benton Jones, general vice-president Chicago; J. Benton Join Chicago; Western region, Western vice-president manager, Western region, P.R.R., Chicago; John Hartmeyer, vice-presi-P.R.R. dent, Kuhner Packing Company, Muncie, Ind.; Charles Donley, Donley & Associates, Pittsburgh, and I. W. Duffy, whose election as president of the road is reported in Railway Officers. The new directors succeed the following, who have resigned from membership on the board: Paul E. Feucht. whose election as executive vice-president of the Chicago & North Western was announced in the May 14 and June 18 issues of Railway Age, who was formerly vice-president. Western region, P.R.R., Chicago; James P. Newell, recently promoted from gen-eral manager of the Pennsylvania's Western region to assistant vice-president, operation, of that road at Philadelphia (Railway Age, June 4); E. J. Gibbons, general manager, Cleveland, Cincinnati, Chicago & St. Louis (N.Y.C.), Cincinnati; J. F. Henry, superintendent, Cincinnati division, P.R.R., Cincinnati; and R. L. Bradley, freight agent for the C.I. at Anderson, Ind. The C. I. which for many years has been owned and operated jointly by the P.R.R. and the N.Y.C., has been leased to a group headed by Mr. Duffy. The group will operate the road on the basis of guaranteeing a specified income to its owners.

Central of Georgia.—Control of Savannah & Atlanta.—The I.C.C. has upheld the recent decision of its Division 4, authorizing this road to acquire control of the 141-mile S. & A. for \$3,500,000. Division 4 approved the transaction last May, but the effective date of the order was postponed when various parties in the case asked for a review by the commission. In upholding the division's findings, the commission said no showing had been made warranting reconsideration. It ruled that Division 4's order would become effective August 14. (Railway Age, May 21, page 183.)

Great Northern.—Acquisition of Pacific Coast Railroad.—I.C.C. Examiner Paul C. Albus has recommended that the G.N. be permitted to acquire control of the 30-mile Pacific Coast line, from Seattle, Wash., to Black Diamond. If the I.C.C. approves the transaction, G.N. will purchase all P.C. capital stock, consisting of 10,-000 shares, for \$1,700,000.

Intervening in the case before the I.C.C. are the Union Pacific; the Chicago, Milwaukee, St. Paul & Pacific, and the Northern Pacific. These roads have connections for interchange of traffic with the P.C., and have asked the commission to impose conditions which will insure the continued independence of the P.C. under G.N. control. Examiner Albus' recommendations included several conditions designed to insure such independence.

New York, Chicago & St. Louis.
—Stock Split.—Two I.C.C. examiners have recommended that the I.C.C. approve this road's plan for splitting its common stock on a five-for-one basis. The road would issue 2,481.245 shares of new common, par value \$29, in exchange for 496,249 shares of \$100 com-The examiners also recommended that the road be permitted to issue new preferred stock, on a share for share basis, in order to change voting rights and redemption provisions of such stock. (Railway Age, April 9, page 74.)

#### **New Securities**

Application has been filed with the

I.C.C. by:
GEORGIA RAILROAD & BANKING CO.—To issue \$2,240,000 of 33/4 per cent debentures, proceeds from the sale of which would be used to pay off a like amount of indebtedness due October 1. The new debentures would be dated October 1 and would mature October 1, 1976. They would be sold at par to the Equitable Life Assurance Society. The obligations maturing October 1 include \$1,500,000 of 6 per cent debentures, authorized by the I.C.C. in 1921, and a promissory note for \$740,000, pavable to the Fulton National Bank of Atlanta, Ga.

Division 4 of the I.C.C. has author-

Division 4 of the I.C.C. has authorized:

CHESAPEAKE & OHIO.—To assume liability for \$6,600,000 of equipment trust certificates to finance in part 28 diesel-electric locomotives and 350 box cars. This equipment is expected to cost about \$8,287,070. (Railway Age, July 9, page 120.) The commission's report approved sale of the certificates, with a 3 par cent interest rate, at 99.3923—the bid of Salomon Bros. & Hutzler and three associates—which will make the average annual cost of the proceeds approximately 3.1 per cent. The certificates, dated August 1, will mature in 30 semiannual installments of \$220,000 each, beginning February 1, 1952. The certificates were reoffered to the public at prices yielding from 2.3 to 3.1 per cent, according to maturity. TEXAS & PACHIC.—To assume liability for \$1,650,000 of series L equipment trust certificates to finance in part eight diesel-electric locomotives and 100 hopper cars, costing an estimated \$2,233,496. Railway Age, July 9, page 120.) The commission's report approved sale of the certificates, with a 2% per cent interest rate, at 98.2891—the bid of R. W. Pressprich & Co. and five associates. This will make the average annual cost of the proceeds approximately 3 per cent. The certificates, to be dated August 1, will mature in 10 annual installments of \$165,000 each, beginning August 1, 1952. The certificates were reoffered to the public at prices yielding from 2.35 to 2.95 per cent, according to maturity.

#### **Dividends Declared**

Cleveland & Pittsburgh.—7 per cent guaranteed, 87½ cents, quarterly; 4 per cent special guaranteed, 50 cents, quarterly, both payable September 4 to holders of record August 10.

Great Northern.—Non-cumulative preferred, \$1, ayable September 21 to holders of record

payable September 21 to holders of record August 21.
Nashville, Chattanooga & St. Louis.—75 cents, quarterly, payable September 4 to holders of record August 9.
Peoria & Bureau Valley.—\$2.50, semiannual, payable August 10 to holders of record August 2.

Reading.—4 per cent 1st preferred, 50 cents, quarterly, payable September 13 to holders of record August 23.
Southern.—51, quarterly, payable September 14 to holders of record August 15.

#### Security Price Averages

July Previous Last 31 week year Average price of 20 representative railway stocks Average price of 20 representative railway bonds 92.17 91.85 94.19

#### RAILWAY OFFICERS

#### EXECUTIVE

J. R. Rohrer, manager of the traffic research bureau of the RAILWAY EXPRESS AGENCY, has been appointed assistant to vice-president-traffic, with headquarters as before at Nw York. Mr. Rohrer started his express career in 1911 with the United States Express Company, a predecessor of



J. R. Rohrer

R.E.A., at Houston, Tex. He has served as chief clerk to the general manager at Omaha, chief clerk to the vice-president at San Francisco, general agent at Denver, assistant traffic manager at New York and manager of the traffic research bureau.

F. A Bailey, assistant freight traffic manager of the SOUTHERN, has been appointed executive general agent, with headquarters remaining at Memphis.

Under a new arrangement whereby the CENTRAL INDIANA has been leased to a group headed by I. B. Duffy on a fixed-income basis by its owners, the New York Central and the Pennsylvania, Mr. Duffy has been elected president of the C.I. and John B. Duffy has been elected vice-president. (Continued on page 93)

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A. W. AYLIN

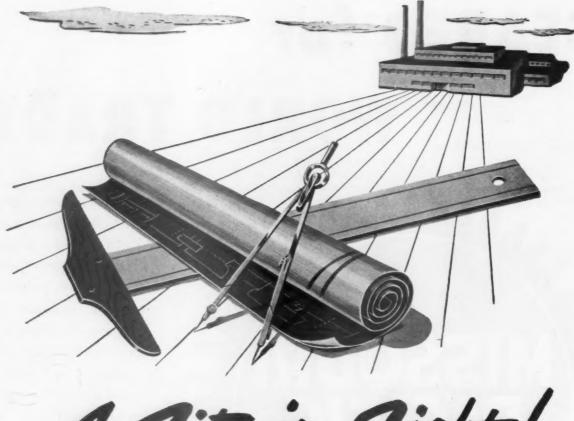
Foreign Freight Traffic Mgr. 1706 Missouri Pacific Bldg. St. Louis 3, Missouri

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August 6, 1951

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Address: Warren T. White, Assistant Vice President, Seaboard Air Line Railroad, Norfolk 10, Va.



(Continued from page 90)

The Duffys are livestock growers in the territory served by the C.I. and have had no previous associations in the railroad field. Other officers of the C.I. continue as heretofore. (See also item under Financial.)

#### FINANCIAL, LEGAL & ACCOUNTING

G. A. Bracegirdle, assistant to treasurer of the CANADIAN PACIFIC, has been appointed assistant treasurer, with headquarters as before at Montreal, succeeding T. H. Moffitt, who has retired on pension, after 51 years of service.

Edward D. Chapman, who has been manager of the real estate bureau of the Boston & Maine, at Boston, for the past 25 years, has retired after 45 years of service with that road. E. Frank Reed, manager of the industrial department, has been appointed manager of the real estate and industrial department. Mr. Chapman entered the service of the B.&M. in 1906 as a rodman in the engineering department and subsequently served as transitman, acting resident engineer on construction of the Billerica shops, assistant engineer in the valuation department and real estate engineer in charge of surveys. He was appointed manager of the real estate bureau in 1926.

Mr. Reed entered railroad service with the B.&M. as an office boy in 1918 and advanced through various clerical positions in the freight traffic department, including that of chief clerk to vice-president in charge of traffic at Boston. In 1928 Mr. Reed was appointed industrial agent and in 1941 he became manager of the industrial department.

#### OPERATING

Frank L. Rhodes, superintendent of organization for the RAILWAY EXPRESS AGENCY, at Chicago, has retired after more than 50 years' service. A native of Bloomington, Ill., Mr. Rhodes began his career with Railway Express and its predecessors there. After advancing through numerous positions he became superintendent of organization in 1938.

J. B. Smith, general superintendent of transportation for the GREAT NORTHERN, at St. Paul, has retired due to ill health. He is succeeded by A. W. Campbell, assistant general superintendent of transportation. Mr. Smith started with the G.N. in 1909 as dispatcher at Spokane, and subsequently served as chief dispatcher there, chief dispatcher and trainmaster at Whitefish, Mont., and chief clerk and assistant general superintendent of transportation at St. Paul. He became general superintendent of transportation in 1930.

transportation in 1930.

Mr. Campbell joined the G.N. in 1910 as a trucker in the freighthouse

at Grand Forks, N. D. Following advancement through various positions, he went into air service in World War I, later returning to the G.N. In 1935 he became assistant to general superintendent of transportation. With the outbreak of World War II he went into service with the 704th Railway Grand Division as commanding officer, acted as director of the U.S.



A. W. Campbell

Military Railway Service in North Africa and Italy, and at the war's end was director of transportation at general headquarters of the U.S.M.R.S. in the European theater of operations. He was awarded the Legion of Merit for his services in those positions. Subsequently he rejoined the G.N. and in 1949 became assistant general superintendent of transportation.

Walter McPherson, who was recently promoted to superintendent of transportation for the CANADIAN NATIONAL'S Alberta district, with headquarters at Edmonton (Railway Age, July 16), started railroading in December 1918 as a clerk on the Grand Trunk Pacific (now C.N.) at Cud-



Walter McPherson

worth, Sask., subsequently serving at operator and rule instructor. In 1945 he became assistant superintendent, moving in 1949 to Winnipeg, where he acted successively as chief rule in-

structor, inspector of dispatching and transportation assistant until his present promotion.

As reported in Railway Age July 2, page 84, the Southern has acquired direct control of the CAROLINA & NORTHWESTERN and the latter has leased the BLUE RIDGE, the DANVILLE & WESTERN, the HIGH POINT, RANDLE-MAN, ASHEBORO & SOUTHERN, and the The enlarged Carolina's YADKIN. operations will continue under the general supervision of M. H. Ramsey, vice-president at Charlotte, N. C. The Blue Ridge, which operates between Belton, S. C., and Walhalla, 44 miles, will become the Anderson division of the Carolina. The Danville, operating between Danville, Va., and Fieldale, 48 miles, with a 7-mile branch to Leaksville, N. C., will become the Martinsville division of the Carolina. The High Point, operating between High Point, N. C., and Asheboro, 28 miles, will become the Asheboro division of the Carolina. The Yadkin, operating between Salisbury, N. C., and Albemarle, 31 miles, with an 11-mile branch to Badin, will become the Albemarle division of the Carolina. The present Carolina & Northwestern, operating between Chester, S. C., and Lenoir, N. C., 110 miles, will be operated as the Lenoir division.

#### TRAFFIC

As announced in the July 2 Railway Age, Harold I. Power has been appointed general freight agent of the Tennessee, Alabama & Georgia, with headquarters at Chattanooga, Tenn. Born August 8, 1908, at Nicholson, Ga., Mr. Power attended Columbus University, Washington, D. C., began his career in June 1925 with the Atlanta Freight Tariff Bureau (now Southern Freight Tariff Bureau), and later served with the Chattanooga Traffic Bureau prior to 1932, when he first became associated with the T.A.&G. as assistant general freight agent at Chattanooga. Leaving the road in 1936, he was subsequently employed by several governmental agencies until his return to railroading in 1944 with the Atlanta, Birmingham & Coast (Atlantic Coast Line). This June he rejoined the T.A.&G. and was appointed general freight agent.

J. I. Metzger has been appointed assistant general freight agent in charge of divisions for the Chicago Great Western at Chicago.

J. A. Senter, general development agent of the Nashville, Chattanooga & St. Louis, has retired, having completed over 43 years' service. Succeeding to his duties is G. G. Barbee, who becomes general industrial agent. The position of general development agent is abolished.

David F. Woods, newly appointed freight traffic manager of the CHICAGO (Continued on page 96)

# SAILBLAZER.

Railway Age Edition

### T & P's Automatic "All-A-Board"

The Juke Box Caller, T & P's automatic train calling and paging system, is the first of its kind to be used by a transportation company in the United States. It is installed in the Fort Worth T & P Passenger Station.

Conceived in 1940 as a solution to the heavy traffic problem, and perfected in 1948, the Juke Box has made 37,479 train calls without a mishap or complaint.

The calls do not give time of arrival or departure, but call the train number, destination, and announce whether it's loading or ready to depart.

The entire system, created by a T & P engineer, works electronically. Each announcement for arrivals, departures, etc., is recorded on special transcriptions. When the operator is ready to call a certain train, he depresses a button which sets into operation a huge record changer capable of selecting any one of forty different calls.

Twenty-eight loudspeakers, all set at low volume, spread the sound evenly throughout the Main Lobby, Concourse, Dining Room, Snack Bar and Lounge Areas.

In addition to the train calls, the operator may also depress a button and provide soft music for travelers' enjoyment.

#### T & P Good Neighbor Policy Forges Ahead

The T & P policy of establishing good neighbor relations in towns along the line has an excellent station modernization record to its credit. To date a dozen freight and passenger stations have been remodeled and/or built anew. The stations are simple and classic in architecture, built in softtoned brick colors and landscaped with modest, neat green lawns and shrubs.

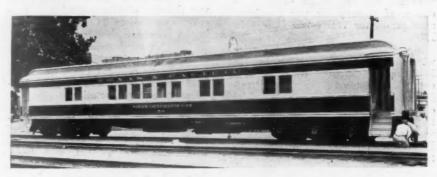
Other items under the heading of better relations with the public include:

# T&P To Be Completely Dieselized in '52

T & P's dieselization program was inaugurated in November, 1946, with a view toward providing the fastest, most modern transportation of freight and passengers.

There are sufficient Diesel-electric locomotives now on order which, when delivery is completed in the early Spring of 1952, will completely dieselize all train and switching operations on the Texas and Pacific Railway from New Orleans to El Paso. Exact figures show

that T & P will have 203 Diesel units in service, consisting of 18 passenger, 118 freight, 22 road switch and 45 switch units. This represents an investment of more than \$30 million in Diesel power, and ranks T & P as one of the few major railroads in the nation completely dieselized.



Special Car Provides Air Conditioning

#### T & P Generator Solves Dieselization Problem

The progressive T & P dieselization program extends in other important directions, such as the T & P Steam Generator Car. This car, an innovation in the Diesel rail transportation field, enables freight Diesels on the T & P to be pressed into passenger service in any emergency, by providing sufficient steam to air-condition a maximum-

Free coffee served mid-morning and mid-afternoon on all trains carrying diners.... Credit cards and time-payment plan for buying railroad tickets.... Educational tours for children and youth groups.

length 22-car passenger train in summer, or to heat it in winter.

No. 50 generates 7,000 lbs. of steam pressure, has a 1,000-gallon fuel oil capacity, and a 5,000-water capacity. It will allow T & P freight Diesels to pull passenger trains from Fort Worth to El Paso—non-stop, should the occasion arise.

The car was constructed in T & P's Marshall Shops from a 1200 series coach. Its two 3,500-lb. steam pressure generators, flash type, can build up 250 lbs. of steam pressure in 2 minutes, compared with old-style generators requiring 30 to 60 minutes. It has a 25-kilowatt Diesel-driven generator to provide electric current to the steam generator and to light the car.

The steam generator can be also used as a stationary power plant at any place on the T & P line.



# C&EI as far as eye can see!

Already rolling in C & E I service are the new boxcars in the photograph. And other additions to the C & E I freight fleet are on the way, from various sources. Orders placed in the last six months alone call for earliest possible delivery of 2850 cars.

These latest orders raise to 5434 the grand total of freight cars purchased by the C & E I since the close of World War II—a total including 3200 hopper cars, 1700 boxcars, and 534 cars of other types.

The investment of many millions of dollars in this new equipment is evidence of the C & E I's determination to give ever-improving service to shippers—and to co-operate to the full in meeting defense transportation needs.

#### CHICAGO & EASTERN ILLINOIS RAILROAD

Ship via C & E I for dependable freight handling and on-time deliveries through the great gateways of the Midwest—Chicago, Evansville, St. Louis, and Thebes.



(Continued from page 93)

& EASTERN ILLINOIS at Chicago (Railway Age, July 16), was born August 30, 1895, at Judson, Ind., and entered C. & E. I. service in May 1913 as yard clerk at Mecca, Ind. Following a number of clerical assignments at Chicago Heights, Ill., Mr. Woods was trans-



David F. Woods

ferred in 1925 to Pittsburgh, as general agent. In September 1942 he was advanced to general freight agent (traffic service and development) at Chicago, becoming acting freight traffic manager last March, which position he held at the time of his new appointment.

W. E. Callender, who has been appointed general freight traffic manager of the CHICAGO & EASTERN ILLINOIS, at Chicago (Railway Age, July 16), entered railroad service in 1906 with the Evansville & Terre Haute as mail boy. Subsequently Mr. Callender held numerous positions with that road



W. E. Callender

and its successor, the C.&E.I. In 1919 he became general agent, passenger department, at Chicago; in 1934, assistant passenger traffic manager, and in 1936, assistant general traffic manager. From May 1941 to October, he served as assistant to vice-president—traffic, later becoming freight traffic manager, the post he held prior to his recent appointment.

L. P. Freeman, traveling freight agent of the CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC at San Francisco, has been appointed general agent there, succeeding F. C. Fairbairn, who has retired following 45 years of service.

William L. Thornton, division passenger agent of the New York Central's Big Four district at Cincinnati, has retired after more than 47 years of service, and is succeeded by Byron C. Giblon, general agent, passenger department, at Los Angeles.

L. R. Burke, assistant general traffic manager of the RAILWAY EXPRESS AGENCY, has been appointed traffic manager, with headquarters as before at New York, succeeding C. B. Williams, who retired on August 1, after 51 years of service. A. L. Demek, assistant regional traffic manager, has been appointed regional traffic manager, with headquarters as before at San Francisco, succeeding J. A. Warren, who has been named assistant general traffic manager at New York. M. F. Koenig, assistant to manager



C. B. Williams

of the traffic research bureau, has been appointed manager of that bureau at New York, succeeding J. R. Rohrer, who has been appointed assistant to vice-president—traffic at New York.

Mr. Williams, who has been in the express industry all his business life, started at the beginning of the century as a trace clerk at Charlotte, N. C., with the Southern Express Company, a predecessor of R.E.A. He advanced through several positions to become traffic manager of the Southeastern Express Company in 1924. When that company merged with R.E.A. in 1938 he was appointed Southern traffic manager of R.E.A. at Atlanta, Ga., becoming traffic manager at New York in 1947.

As reported in the July 16 Railway Age, H. Clarke Roberts and W. A. Feldmann have been appointed freight traffic managers of the St. Louis Southwestern. Mr. Roberts was born at Mt. Calm, Tex., July 12,

1896, attended Baylor University, and began railroad service with the Missouri-Kansas-Texas in 1917 as a clerk at Waco, Tex. Two years later he joined the Cotton Belt in a similar ca-



H. Clarke Roberts

pacity. Progressing through the ranks, in 1932 he became assistant general freight agent and in 1940, general freight agent, in which position he continued until his new appointment.

Mr. Feldman started his career with



W. A. Feldmann

the Missouri Pacific in 1918. He went to the Cotton Belt in 1926 as a division clerk, and advanced to assistant general freight agent in 1940, which post he held at the time of his recent change.

Stanley J. Eldredge, Eastern freight agent of the ATLANTIC COAST LINE, has been appointed general Eastern freight agent, with headquarters as before at New York. Mr. Eldredge, a native of Elizabeth, N. J., entered railroad service with the Pennsylvania on June 7, 1915. On December 1, 1923, he joined the freight traffic department of the A.C.L. as commercial agent at New York, transferring to Philadelphia in 1928. He was promoted to Eastern freight agent at New York on November 1, 1936, which position he held until his recent appointment.





KEEP BUYING BONDS

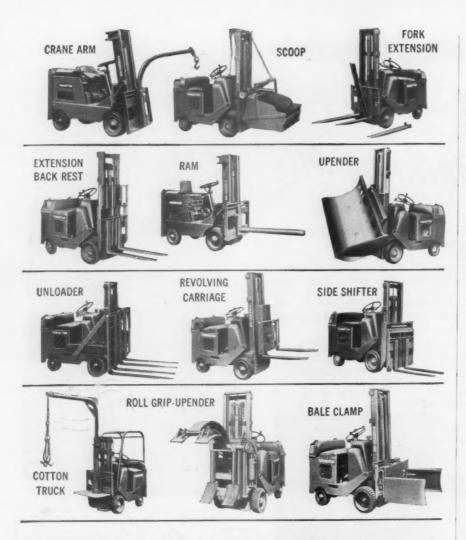
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As reported in the July 16 Railway Age, C. J. Dinkelkamp has been appointed assistant freight traffic manager for solicitation of the St. Louis Southwestern, and A. J. Maloney and C. H. Jacques have been appointed general freight agents. Mr. Dinkelkamp was born at St. Louis, December 31, 1897, entered railroad service in July 1913 with the Cotton Belt, later held various positions, and in 1938 became general agent at St. Louis. He was promoted to general freight agent in 1946, in which capacity he continued until his recent appointment.

Mr. Maloney's railroad career began in 1912 as a stenographer for the Missouri Pacific. Joining the Cotton Belt in the same capacity in 1915, he advanced through numerous clerical posts and in 1940 became assistant general freight agent, the position he held at the time of his latest change.

Following three years service with the Wabash, Mr. Jacques went with the Cotton Belt as a stenographer in 1920, rose to assistant to traffic manager in 1940, and in 1942 became assistant general freight agent, remaining in that position until his new appointment.

J. K. O'Brien, assistant manager of the world commerce department of the Chesapeake & Ohio, has been appointed manager of that department, with headquarters as before at Richmond, Va. John W. Gayk, stenographer-clerk in the office of the general manager of the department at New York, succeeds Mr. O'Brien at Richmond.

Joseph S. Davis has been appointed division freight agent of the CHICAGO, INDIANAPOLIS & LOUISVILLE at Indianapolis, succeeding Sherman L. Wehrung, who is on leave of absence.

#### MECHANICAL

Troy H. Bickerstaff has been appointed general supervisor of air brakes on the Atchison, Topeka & Santa Fe at Topeka, Kan., succeeding Frank T. McClure, who is retiring after 52 years of service.

#### PURCHASES & STORES

Albert C. Ernst, who has been promoted to assistant general store-keeper of the St. Louis Southwestern at Pine Bluff, Ark. (Railway Age, July 2), was born at New Orleans, September 27, 1900. Beginning his railroad career in February 1916 with the Illinois Central in his native city, Mr. Ernst joined the Cotton Belt in April 1922 as stock clerk at Pine Bluff. After advancing through several positions in the stores department, he became traveling storekeeper in September 1942, and continued in that capacity until his recent promotion.

R. F. Welch, who was recently promoted to general storekeeper of the Texas & Pacific, at Marshall, Tex. (Railway Age, June 25), is a native of that city. He began railroad service with the T.&P. as a clerk in the stores department in January 1919, and subsequently held various clerical



R. F. Welch

positions, becoming general stores accountant in 1931 and traveling storekeeper in 1944. Mr. Welch was advanced to assistant general storekeeper in January 1946 and remained in that post until his recent promotion.

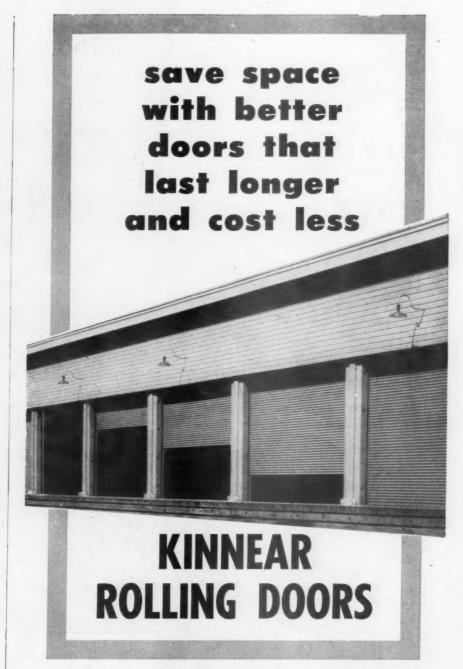
H. A. Unmacht, assistant district storekeeper of the Chicago, Milwau-Kee, St. Paul & Pacific at Chicago, has been promoted to district storekeeper of the road's lines west of the Missouri river, with headquarters at Tacoma, Wash. His former post has been abolished.

Theron E. Martin, whose appointment as assistant purchasing agent of the St. Louis Southwestern at St. Louis, was announced in the July 2 Railway Age, was born at Texarkana, Tex., September 14, 1911. Mr. Martin was educated in Texas, where he did extension work at Texas Agricultural & Mechanical College and attended East Texas State Teachers College. He entered railroad service in July 1929 with the Texas & Pacific, and subsequently held numerous assignments with that road until World War II, when he left to serve 17 months with a U. S. railway mission in Mexico. Following his return to the United States, he became employed by the Cotton Belt as car inspector in 1945, and advanced to general car foreman at Tyler, Tex., in 1948. Mr. Martin held the latter post up to the time of his recent appointment.

#### OBITUARY

#### William E. Navin, Rutland President, Dies at 64

William E. Navin, president of the Rutland at Rutland, Vt., died on July



The easy, upward action of Kinnear Rolling Doors brings time-saving efficiency to any doorway. The strong, all-metal, interlocking slat curtain opens completely out of the way, safe from damage... provides extra safety against fire, wind and intrusion when closed. And they're ruggedly built in every detail, to give extra years of low-cost, low-maintenance service. Any size; motor or manual control. If you haven't a Kinnear catalog for quick reference now, send for your free copy of the latest issue.

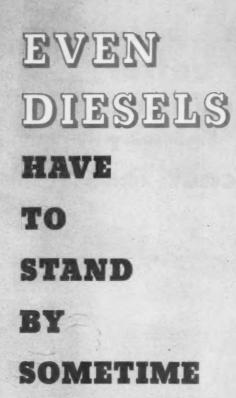
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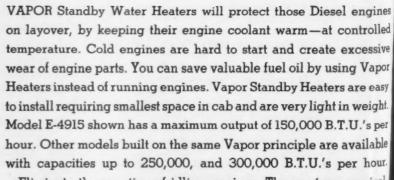
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29 of a heart attack in that city at the age of 64. Mr. Navin was born at Center Rutland, Vt., on May 30, 1887, and entered railroad service with the Rutland on September 19, 1903, in the general freight department. After service with the United States Navy during World War I, he rejoined the Rutland as chief clerk in the loss and damage prevention department, subse-



William E. Navin

quently becoming supervisor of that department, general agent in the traffic and transportation departments and general freight agent. From June 1, 1941, to July 21, 1944, Mr. Navin served as receiver of the Rutland and on the latter date he became trustee in bankruptcy. He was named president in November 1950, when the road emerged from reorganization.

Jesse P. Patterson, who retired on May 31 as assistant vice-president, freight traffic, of the New York Central System at New York, died on July 30 at Columbia Presbyterian Medical Center in that city after a long illness. He was in his 68th year. A biography and photograph of Mr. Patterson were published in Railway Age, December 23, 1950, page 51.

J. C. O'Connell, car service agent for the Association of American Railroads at Minneapolis, died at Tracy, Minn., on July 25, on board a special train en route to the meeting of the Northwest Shippers Advisory Board. He had served the A.A.R. for 26 years, prior to which he was in the transportation department of the Northern Pacific.

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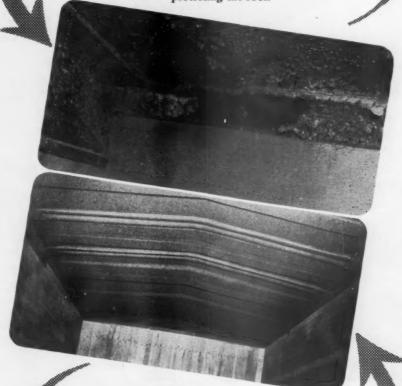
LPHIA

Eugene P. Soebbing, assistant general passenger agent of the Wa-BASH at St. Louis, died of a heart attack on July 28 at his farm at Plymouth, Ill.

Robert O. Collins, who retired on October 31, 1946, as assistant comptroller of the Delaware, Lackawanna & Western at New York, died at his home in East Orange, N. J., on July 26, at the age of 71.

## FREIGHT CAR "INSULATION"—6 Months Old

Shown below is an unretouched photo of a freight-car "insulation" material six months after application in a new car. Car roof corrosion started with the water in the material when applied. It fails on the most important functions of car roof insulation: Preventing condensation and protecting the roof.



## DEDNOX (60% CORK) INSULATION—14 Years Old

Dednox 60% Cork Insulation, since it contains no water, coal tar or toxic solvents, is in excellent condition 14 years after application. Further, it insulates to prevent condensation in car roofs; it waterproofs and adheres to protect against corrosion of roof wood or metal; it will not run or slide off at any temperatures up to 300° F.; and Dednox shrinks 3/2 less in drying than emulsion-type coatings.

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#### **Current Publications**

#### CHART

The U. S. Freight Carrying System, 1940 vs. 1950. Dun & Bradstreet, Inc., 290 Broadway, New York 8. Free.

This chart presents a comparison of transport facilities—water, rail, highway, pipeline, and air—in 1940 and 1950, the indicators being volume of traffic carried and changes in carriers' equipment and capacity. Dun & Bradstreet estimates that national expenditures for all types of transportation—passenger and freight—were \$47 billion in 1950, or one dollar out of every five of the national income.

#### FILM CATALOG

1951 Film Library Catalogue. 49 pages. New York State Department of Commerce, Division of State Publicity, Albany 7, N. Y. Free.

Lists by subject and title films which are available without charge for use by industrial, commercial and business organizations, civic, educational and service clubs, and other groups. Several railroad films are included, as well as films on industrial development and economics, industrial processes and products, industrial supervision problems, employee relations, and industrial training. All films are 16-mm. sound, unless otherwise indicated.

#### PERIODICAL ARTICLES

A Century of Ideas. N. A. S. S. Quarterly, Summer 1951 issue. National Association of Suggestion Systems, 122 S. Michigan ave., Chicago 3.

A review of the beginning and development of, and results secured with, the Illinois Central employees' suggestion sys-

The Illinois Central: A Centennial View, by Robert M. Sutton. Current Economic Comment, May 1951, pp. 3-16. Bureau of Economic and Business Research, College of Commerce, University of Illinois, 205 David Kinley Hall, Urbana, Ill. Free.

Mr. Sutton, who is instructor in his ory at the University of Illinois, and a railroad fan as well as an historian, before glancing back over the centennial history of the "Main Line of Mid-America," briefly examines the factors which make a railroad significan, as well as prosperous, in our time. These, he says, are freight traffic, passenger traffic, motive power, and improved finances. He then discusses the I. C.'s historical background, the impact on it of the Civil War, post-Civil War problems, and the railroad and its public.

The Day Coach, by David P. Morgan. Trains Magazine, August 1951, pages 38-45. Kalmbach Publishing Company, 1027 N. 7th st., Milwaukee 3. Single copies, 35 cents.

A summary of the decline and subsequent comeback of the day coach from the 1920's to the present, written with a passenger's viewpoint as to comfort, convenience, etc., but with a railroad man's knowledge of technical advances and op-



Dowelled ties-as proved in service-provide increased service life and reduce tie replacement costs to a minimum. Now ... the Graham Tie Dowelling Machine has been designed and developed to reduce dowelling operations to lowest cost. Completely automatic, this modern machine applies Giant Grip Dowels into one or both ends of ties in a fraction of the time required by other methods. Investigate this machine today and give your road the benefit of its advantages in saving time, money and



First Step — Ties are automatically fed into the machine, equalized for position and squeezed in the vise.



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"THE STEEL INDUSTRY is currently operating at more than 100% of rated capacity—turning out well over 2 million tons of steel per week. This record high production—every ton of which is in urgent demand—cannot be kept up unless we get more scrap from every potential source. For without your scrap we cannot produce enough steel. Today, every ton of steel turned out requires a half a ton of scrap for its production. That's why scrap—more scrap—is so urgently needed, and needed right away.

"The fact we have to face today is that steel mills are operating on a hand-to-mouth basis as far as scrap is concerned. Some mills are working on only a two-day supply of scrap. We already have had to shut down steel-making furnaces for lack of scrap.

"That's why we are asking you to strain every effort to get more scrap out of your plants and yards and on its way to the mills . . . to search out the scrap that doesn't come to market in normal times. You'll find this "dormant" scrap in obsolete equipment, tools and machinery that you haven't used for years . . . overlooked in your storage sheds . . . or rusting away in a junk pile in some forgotten corner. It's there. Turn it in at once—so we can turn out the steel you need. We can't do it without your help."



President, United States Steel Corporation



1-1182

erating changes that have so greatly improved the lot of the coach traveler in that period. Depicting the typical coach of the twenties as an "operating department coach: cheap to construct, cheap to maintain and durable as a bathtub, though seldom as clean," Mr. Morgan goes on to show how the countless improvements wrought in both new and "modernized" coaches since that era have combined to restore coach travel from an accommodation to a service. Efforts of different roads to improve suburban coaches have not escaped Mr. Morgan's roving—and knowing—eye.

Mail by Rail; The Story of the Postal Transportation Service, by Bryant A. Long and William J. Dennis. 414 pages, illustrations. Simmons-Boardman Publishing Corporation, 30 Church st., New York 7. \$4.95.

This is the dramatic story of those unsung experts—the railway mail clerks—who sort your letters in transit on speeding trains, as well as (now) on highway buses, to save precious hours and days in delivery. Many interesting facts concerning the men and the organization are included —robberies and wrecks; the bustle of busy R.P.O.'s; terminals, transfer and field

offices; "catches on the fly"; study requirements; route-agent sorting over 100 years ago; the struggle for unionism; amazing facts of service ingenuity and integrity; the challenge of wars, strikes and other calamities; old-time street car and electric R.P.O.'s; the R.P.O. hobby; operations in Britain, Canada and all over the world; and the highway post office, flying post office and other new developments.

Transportation Factors and National Transportation Policy; A Partial Analysis, by Arthur K. Branham. 185 pages, maps,

#### MAPS

Military Installations in the United States. 17 inches by 31 inches. Available from Union Pacific traffic representative or from C. J. Collins, general passenger traffic manager, U.P., 1416 Lodge st., Omaha 2, Neb. Free.

Issued for the second time within a decade, this colored map of the U. S. shows location of all Army, Navy, Marine and Air Force installations by means of distinctive symbols such as miniature planes, anchors, etc. On the reverse, the map lists all military installations, indicating the nearest railroad station and post office for each. The map has been checked and approved by each branch of the armed forces.

Lines of the Missouri Pacific. Wall map, 48 inches by 36 inches, printed in seven colors on heavy paper with wood borders at top and bottom. Traffic Department, Missouri Pacific Lines, Missouri Pacific bldg., St. Louis 3.

Geographically correct, this new map is printed with states shown in different colors as an added convenience to shippers and others.

#### BOOKS

The Fascination of Railways, by Roger Lloyd. 160 pages, illustrations. George Allen & Unwin, Ltd., London, England. Available in this country from the Macmillan Company, 60 Fifth ave., New York 11. \$3.

Several books have recently been written to tell the history of the British Railways, or to explain how they work. This book, as its title suggests, is first a testimony to the apparently inexhaustible power of the railway to hold the life-long fascination of all sorts and conditions of men, women and children, and secondly to attempt to communicate to others the particular fascination which has always held the author enthralled. It attempts to achieve in prose what railway photographers achieve with their cameras—the presentation of a vivid picture of railways as a living and moving organism. It begins by using recollection to build up a definition of the particular fascination of the author; and then passes to a series of vignettes of railway organization as an intricate mechanism with life in it. In other chapters the reader is taken to stand on various railway stations, and to travel by different trains.



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charts. Engineering Experiment Station, Purdue University, Lafayette, Ind. \$1.50.

Issued as Bulletin No. 112, March 1951, by the Engineering Experiment Station, this study presents a partial analysis of the economic significance of each form of transportation, a discussion of our national transportation policy, barriers to interstate commerce, the need for greater safety, and certain philosophical concepts of common ownership, coordination, and integration. Brief discussion of control of entry into the field of transportation, rates, and discrimination practices have been integrated in the text. In addition, evidence of government promotion and regulation and of public aid or subsidy is treated in some detail. A general summary, typical questions which need further investigation, and an extensive bibliography are included.

#### PAMPHLETS

Handbook on Sanitation of Railroad Servicing Areas, prepared by Division of Sanitation, Public Health Service, Federal Security Agency. 28 pages. Superintendent of Documents, Government Printing Office, Washington 25, D. C. 20 cents.

This booklet is intended for use by designers and operators of railroad servicing equipment and facilities, as well as by state and local health department personnel and others who make periodic inspections of facilities and operations in servicing areas. Sections of regulations



pertinent to the contents of the handbook are quoted. In addition, it includes a brief description of the interrelationships of railroad companies, state health departments, and the Public Health Service, and a copy of the form "Report on Railroad Watering Point Sanitation," used by representatives of state health departments and the Public Health Service during their annual inspections. This bookle: is the first of three which have been prepared in collaboration with the Joint Committee on Railway Sanitation of the Association of American Railroads. The other two, dealing with railroad passenger car construction and dining cars in operation, are expected to be off the press in the near future.

Selling Techniques; Railroad Passenger Traffic, by A. S. Mussatti. 44 pages. Southern Pacific Company, Passenger Traffic Department, San Francisco or Los Angeles, Cal. Free.

Recognizing the need for those in the passenger traffic field to develop and apply an organized sales approach, Mr. Mussatti has prepared this booklet. Working from the premise that most people working at ticket counters and on telephones in passenger traffic offices consider themselves transportation clerks rather than sales people, he discusses such subjects as selling a service, making a good first impression, the customer's needs, offering a travel plan, asking for the business, and managing your sales effort. Examples of the right and wrong approaches are given, and he reaches the conclusion that "the transportation salesman who desires to properly develop and manage his sales effort must accomplish these four objectives-develop and practice a planned sales approach; use ingenuity in following business leads; maintain for himself the selling tools that save him time; and learn everything possible about his travel roduct.

Air Transport Facts and Figures, 12th Edition, 1951. Air Transport Association of America. 19 pages, charts, tables. American Aviation, 1025 Vermont ave., N. W., Washington 5, D. C.

Contains statistics on airline earnings, traffic, fares, personnel, and accidents: air mail revenues, payments and traffic; airports; and aviation gasoline taxes.

The Duties and Opportunities of an Industrial Traffic Manager, J. 6. Lloyd Wilson. 22 pages. Published and distributed by the public relations department, St. Louis Southwestern, St. Louis 2, Mo.

Dr. Wilson has revised and brought up to date material which originally appeared in Railway Age April 7, 1945, and which was later reproduced in pamphlet form by the Cotton Belt. Among the additional material contained in the revision of his original article is a section devoted to traffic management in emergency periods. Included also are Defense Transportation Administrator Knudson's 10 obligations of shippers and receivers of freight under the emergency code of transportation and his 10 suggestions for railroads to help the nation through the emergency.

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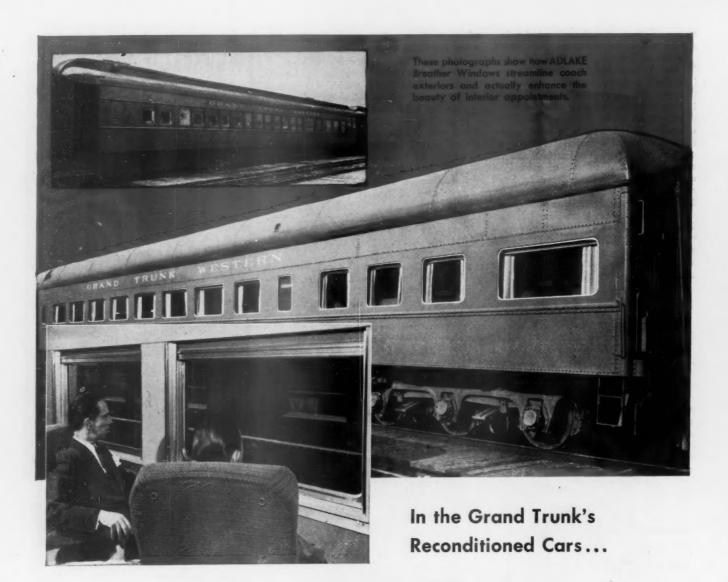
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- New York City: West Side Terminal, 10th Avenue and 33rd 5t. In place, chain 2520' long, with three 20 HP, 220V, 3 phase, 60 cycle motors and 3 caterpillar drives. Installed by Mechanical Handling Systems, Inc.
- ★ Los Angeles: Express Terminal in Union Passenger Terminal. In place, chain 722' long, driven by one 15 HP, 440V, 3 phase, 60 cycle motor, with caterpillar drive. Installed by Jervis B. Webb Co.
- ★ Jersey City, N. J.: Garage at 168 York St. In storage, one caterpillar drive of 10 HP capacity and one 10 HP, 220V, 3 phase, 60 cycle motor in need of repairs. Installed by Jervis B. Webb Co.

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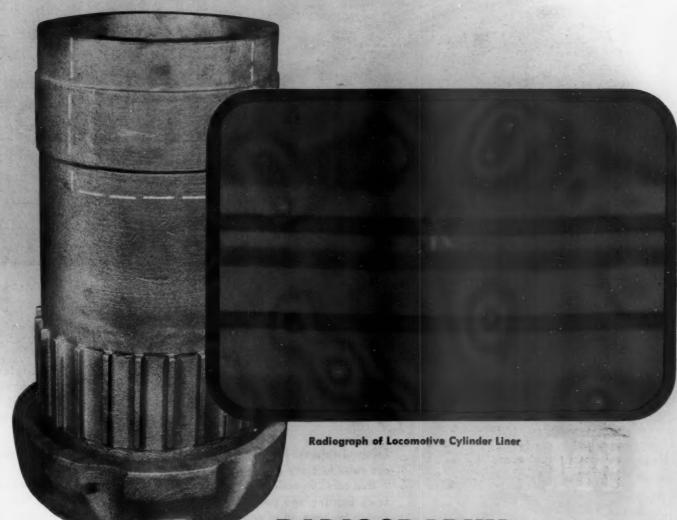
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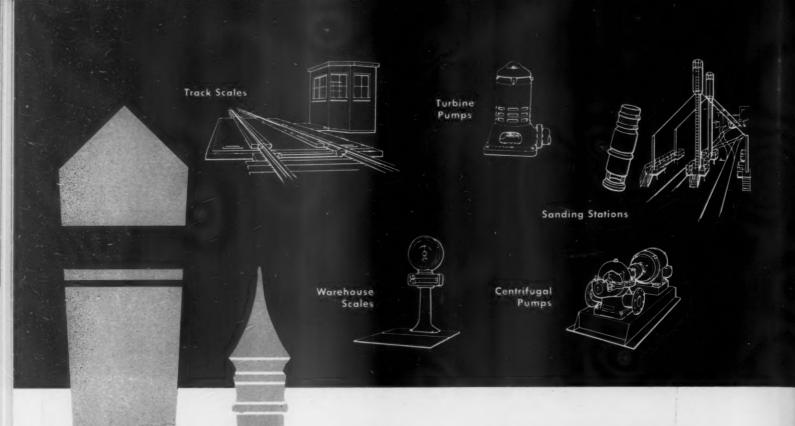
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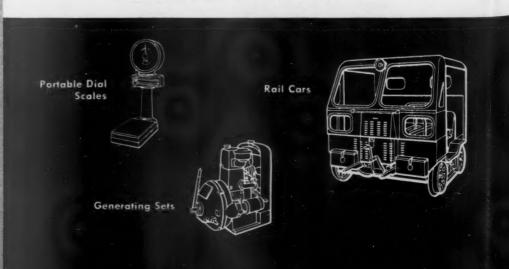
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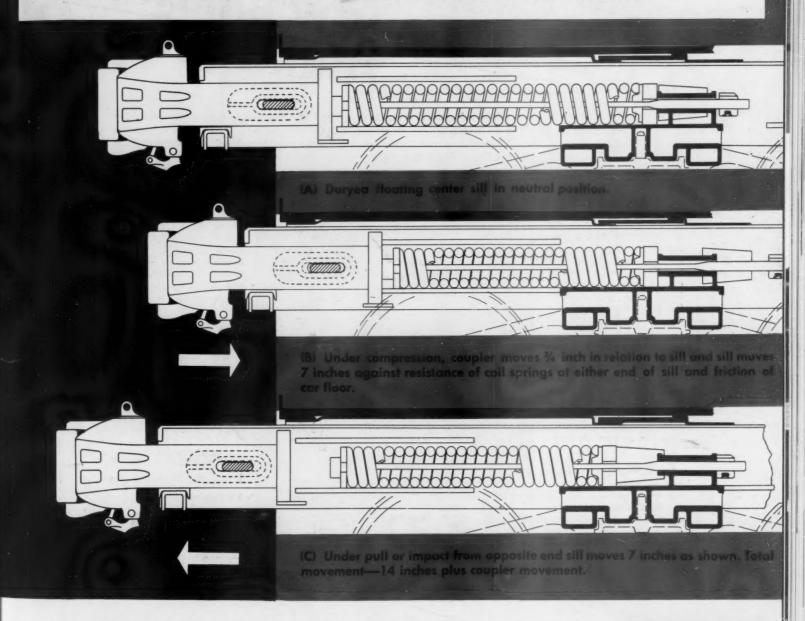
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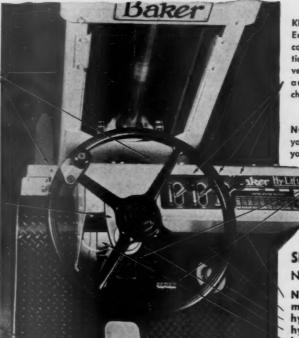
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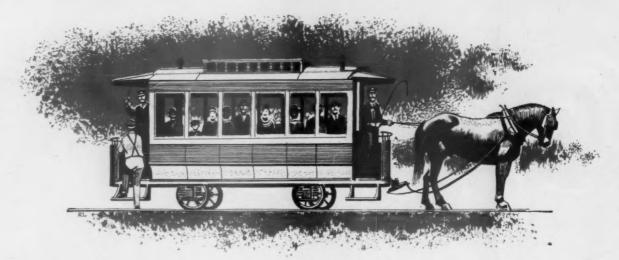


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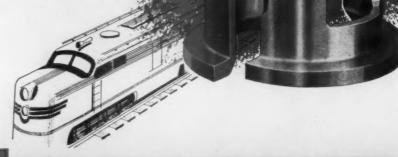
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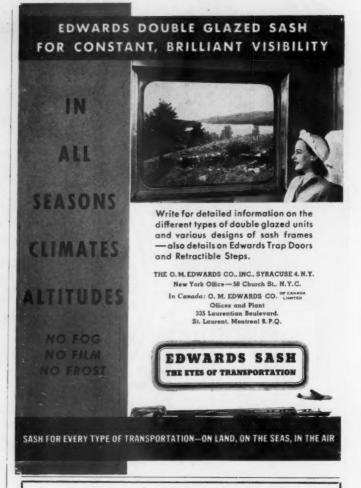
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